SERVICE MANUAL

EN

TROPHY

handicare

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1 Introduction Service manual Trophy

1.1 This manual

This manual contains the instructions for repairs and general maintenance of the Trophy Scooter.
Mechanics who do repairs on this scooter must be well trained and familiar with the repair methods and the maintenance of the Trophy scooter.
Always make sure that the work is carried out safely, particularly with respect to procedures requiring the scooter to be lifted up.
We advise that you contact our service department before doing repair work on a scooter that has been involved in an accident.
The following specifications are important when ordering parts:

- Model
- Year of manufacture
- Colour
- ID-number
- Part number
- Name of the part concerned

This information is provided on the identification plate. See 'Identification of the product'.

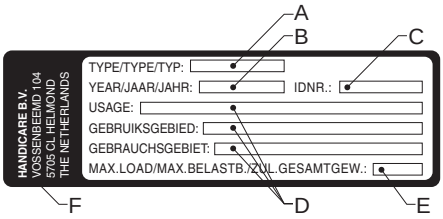
Available documentation
The following technical documentation is available / required to service this scooter:

- User manual
- Service manual

Service and technical support
For information concerning specific settings, maintenance or repair works please contact the Handicare Customer Service department. They are always prepared to help you. Ensure you have at hand:

- Model
- Year of manufacture
- ID-number

1.2 Identification of the product



The identification plate contains the following data:

A. Model
B. Year of manufacture
C. ID-number
D. Usage: indoor, outdoor or both
E. Maximum load in kg
F. Manufactures address

See for the location of the identification plate ´markings on the scooter´.

1.3 Symbols used in this manual

Note!
Pointing out possible problems to the user of this manual.

⚠ ***Caution!***
Advice for the user of this manual to prevent damage to the product.

⚠ ***Warning!***
Warnings for the user of this manual to prevent personal in jury.

Not following these instructions may result in physical injury, damage to the product or damage to the environment!

Reference symbol
When necessary this service manual refers to other manuals as shown below:
🕮 Battery charger: refers to the user manual of the battery charger
🕮 Scooter: refers to the general user manual of the Trophy

2 Safety

2.1 Personnel qualification

Repairs may only be carried out by trained and authorised service technicians.
During the execution of their work, they are at all times fully responsible for the fulfilment of locally applicable safety guidelines and standards.
Temporary employees and persons in training may only carry out repair and replacement work under the supervision of an authorised service technician.

2.2 Identification on the product

Safety
Safety information is indicated with the warning symbol.

⚠ ***Warning!***
Follow the instructions carefully next to these warning symbols! Not paying careful attention to these instructions could result in physical injury or damage to the scooter or the environment. Wherever possible, safety information is also provided in this manual in the relevant chapter.

2.3 Temperature

⚠ ***Warning!***
Avoid physical contact with the scooter's motor. The motor is continuously in motion during use and can reach high temperatures. After use, the motor will cool down slowly. Physical contact may cause burns.

Ensure that the scooter is not exposed to direct sunlight for extended periods of time. Certain parts of the scooter, such as the seat, the backrest, the armrests and the steering device become hot if exposed to the sun for too long. This may cause burns or skin irritation.

2.4 Electromagnetic radiation and interference

The scooter has been tested for compliance with the applicable requirements regarding electromagnetic radiation (EMC requirements).
The Trophy's immunity level is 20 volt/metre.

Note!
It cannot be excluded that electromagnetic radiation emanating from mobile telephones, medical apparatus and other sources, may have an influence on the scooter.

It cannot be excluded that the scooter will interfere with the electromagnetic fields of, for example, shop doors, burglar alarm systems and/or garage door openers.

In the unlikely event that such problems do occur, you are requested to notify your dealer immediately.

Powered wheelchairs and scooters can be affected by sources of radio waves, such as radio and TV transmitters, amateur radio stations, lifts, transmitting equipment, stereo radios and mobile telephones If the scooter's electronics are not well shielded, sensitive electrical devices, such as shop alarm systems and garage door openers, can be affected. The scooter has been tested for such interference. Please report any problems of this nature to your dealer immediately.

The following advices are intended to prevent the electric scooter from being driven unintentionally, which could lead to serious injury.

1. Do not turn on any manually controlled equipment for personal communication, such as a radio transmitter or mobile telephone, while the electric scooter is switched on.
2. Keep at a distance from transmitter equipment, such as radio and TV stations.
3. If the scooter starts making unintended movements, or if the brake goes into freewheel / neutral mode, turn off the powered wheelchair or scooter by removing the ignition key from the lock.
4. Be aware of the fact that any accessories, components or adaptations installed on the scooter may increase the effect of radio waves.

Note:
There is no easy way of testing the effects of radio waves on the general immunity of powered wheelchairs or scooters.

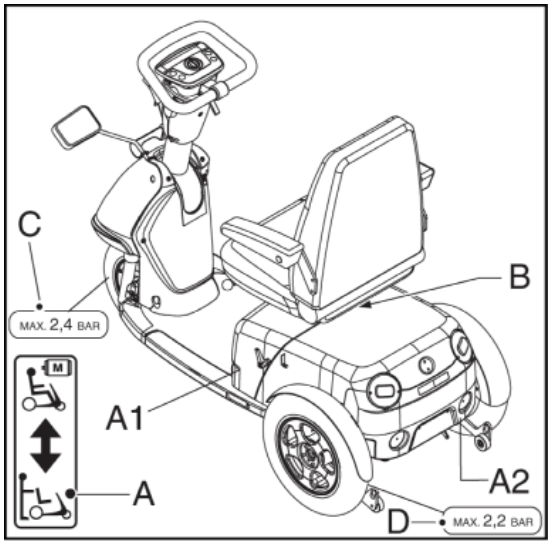
5. All cases of unintended movements of the scooter spontaneously going into freewheel / neutral mode should be reported to your dealer or to the scooter manufacturer. When reporting, please indicate whether a source of radio waves was nearby at the time.

2.5 Markings on the scooter

Never remove or cover up the markings, symbols and instructions affixed to the scooter. These safety measures must remain present and clearly legible throughout the entire lifestam of the scooter.

Replace or repair any markings, symbols or instructions that have become illegible or damaged immediately. Please contact your dealer for assistance.

Product labels
The following sticker/label can be found on the product:

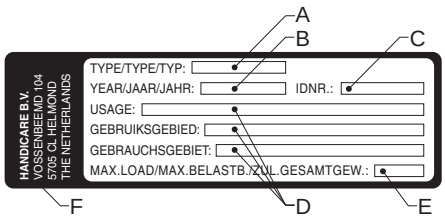


A1 Free wheel Trophy Alpine (and models < 2012)
A2 Free wheel Trophy (if not A1)
B. Identification plate
C. Tyre pressure front wheel(s)
D. Tyre pressure rear wheels

A. Freewheel handle position

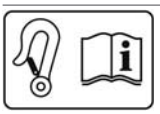
1. DRIVE mode: Lever fully upper position: Motor brake applied, scooter can not be pushed
2. FREEWHEEL / NEUTRAL mode: Lever lowest position: Motor brake not applied. Scooter can be pushed manually when electronics are off.

B. Identification plate



A. Model
B. Year of manufacture
C. ID-number
D. Usage: indoor, outdoor or both
E. Maximum load in kg
F. Manufactures address

C. Instruction for transportation (📖 Scooter)



Warning!
The scooter is not intended to be used as seat in motor vehicle.

2.6 Technical specifications

No changes may be made to the technical specifications.

2.7 Modifications / Adaptations

Modifications, not executed by Handicare, to components and electronics of this product are not permitted.

3 Tools

3.1 Tools

The tools below are needed for various mechanical settings and maintenance:

Quantity	Description	Size (mm)
1	Screwdriver, medium	5
1	Screwdriver, crosshead	-
1	Hammer (plastic)	-
1	Chaser	-
1	Circlip pliers	-
1	Ring spanner	7 / 10 / 11 / 13 / 17
1	Torque wrench	-
1	Socket	7 / 8 / 10 / 11 / 12 / 13 / 16 / 17
1	Socket bit	6
1	Allen key	3 / 4 / 5 / 6 / 8
1	Loctite	243
1	Shock absorber adjustment key	-

Use only high-quality tools for the adjustment(s) described.
Make sure that the hexagon of the spanner is attached securely to the hexagon of the fastening article. This prevents the 'rotation' of hexagons of fastening articles and spanners that may affect proper adjustment.

The following tools are needed for various electronic settings:

Quantity	Description	Function	
1	PG - pc programmer B-version	Adaptation of the drive programs and technical settings. Reading out the fault history	PR0210
1	PG - programmer unit SPIB handheld	Alternative device for PC. Adaptation of the drive programs and technical settings. Reading out the fault history	10237

4 Spare parts

4.1 Use of the parts lists

This document is meant as a reference book to be used to order parts for the scooter that is shown on the front cover.

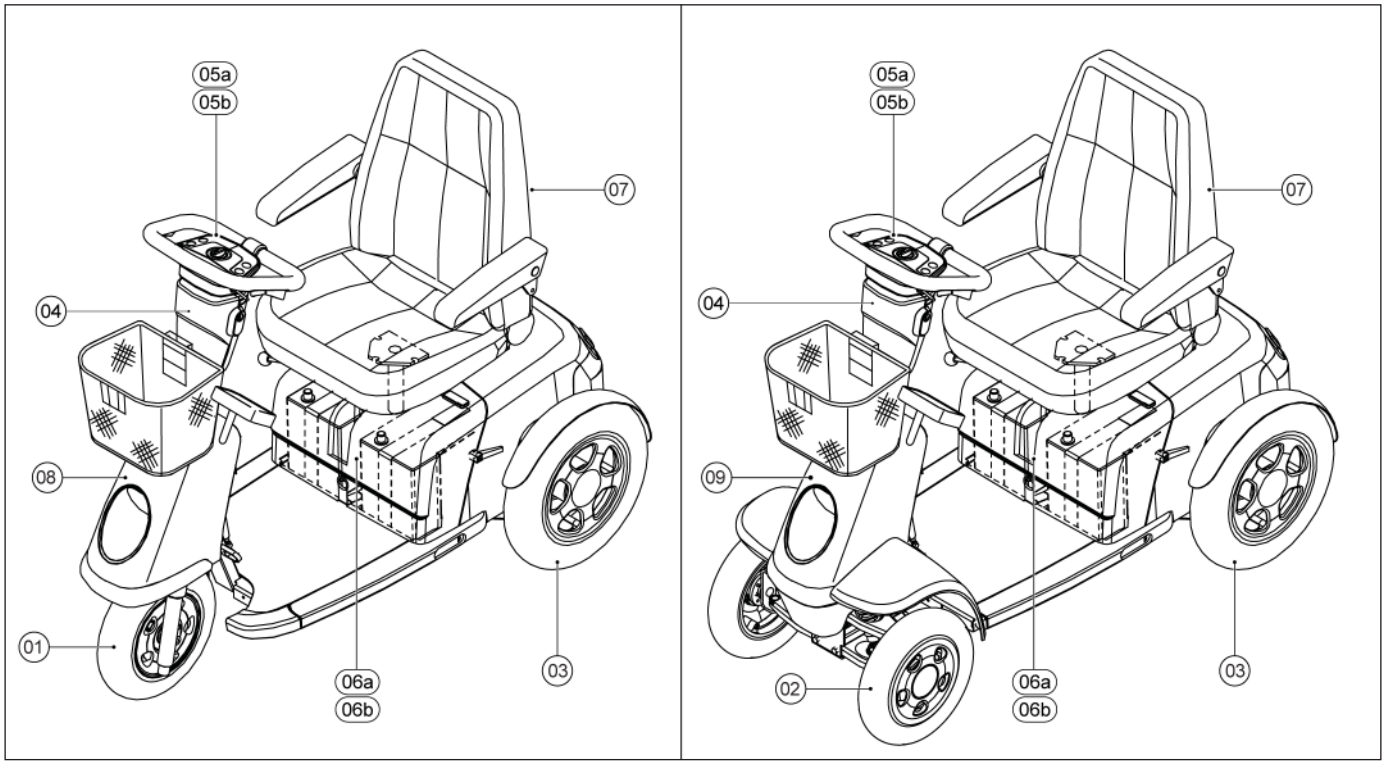
How to order
When ordering parts, please specify:
- ID-number (see the identification plate)
- Group (to which the relevant part belongs)
- Article number
- Number of parts required
- Description (in the relevant language)
- Dimensions (if applicable)

Remark
- If a part does not have a position number, it means that the part concerned cannot be purchased separately. The part concerned is part of the assembly shown. This assembly must be ordered as one piece. It has to be replaced in its entirety.
- Boxed position numbers refer to the relevant drawing.

Order address
Please mail or fax your orders to your supplier.

Service technicians
Repairs may only be carried out by trained and authorised service technicians. During the execution of their work they are at all times fully responsible for the fulfilment of locally applicable safety guidelines and standards.
Temporary employees and persons in training may only carry out repair and replacement work under the supervision of an authorised service technician.

4.2 Overview exploded views



Pos	Description	Page
01	Front frame, front fork and front wheel Trophy 3W	12
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04	Steering column, mirror and basket	16
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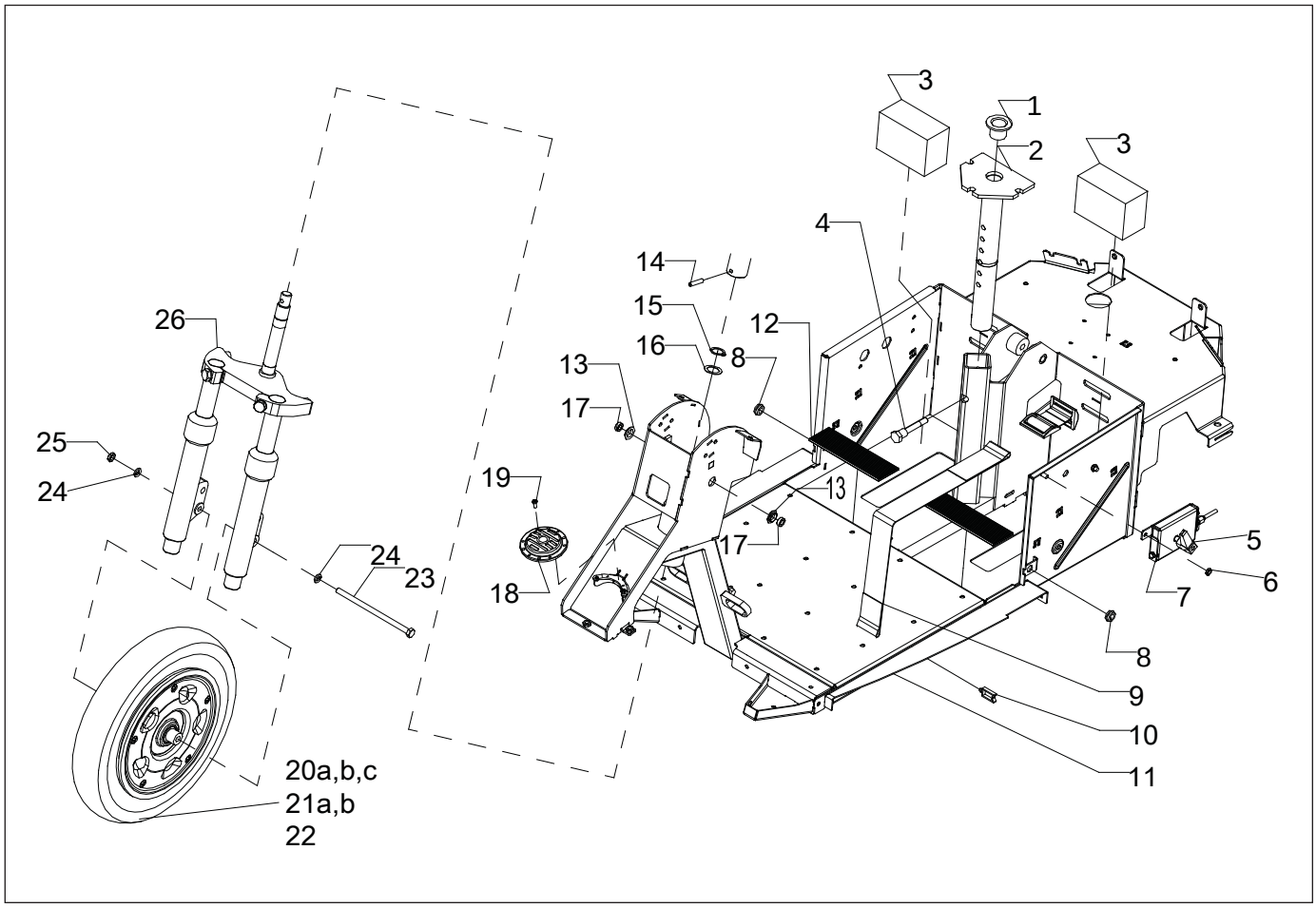
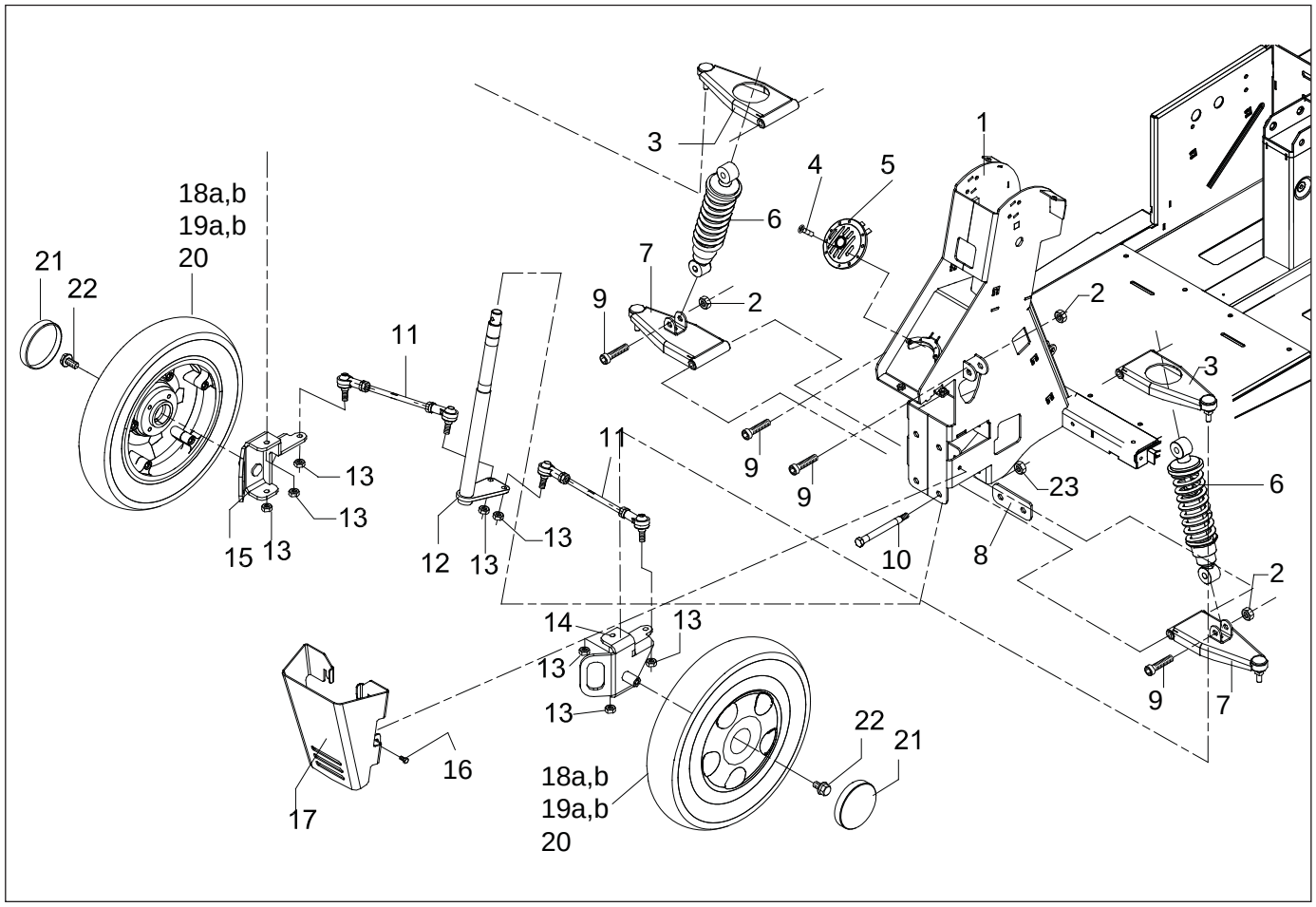
01 Front frame, front fork and front wheel Trophy 3W



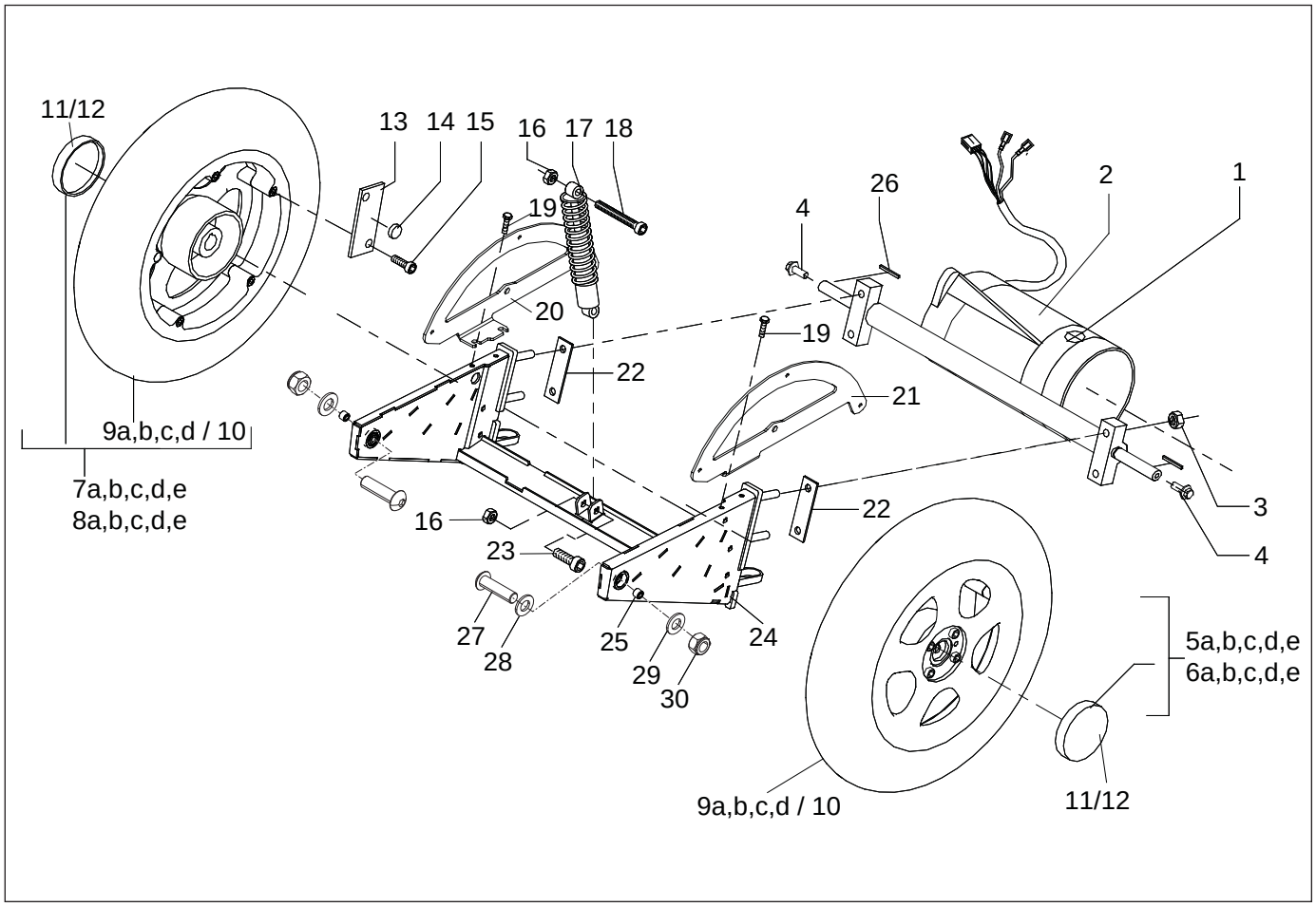
Pos	Qty	Article number	Description
1	1	9003907	Nylon bearing seat post
2	1	9004025	Seat post
3	2	00001.0008	Spacer block, battery
4	1	9005156	Seat post bolt
5	1	9000762	Lever freewheel
6	2	00000.1701	Lock nut M6
7	1	9000178	Freewheel mechanism for Schmid transaxle
7	1	9000871	Hand brake mechanism
8	2	9000630	Tulle
9	2	9000591	Strap, battery retention
10	14	9000788	Clamp, cable
11	1	1010286	Front frame, incl. ball-head bearings Trophy 3W
12	2	1001277	Anti-slip mat
13	2	00000.5306	Bearing bush 14x16x4 Iglidur
14	1	00001.0804	Rolled pin 6x30
15	1	1001796	Lock washer
16	1	00000.6008	Ring 20x28x1
17	2	9000632	Bush bearing tiller
18	1	9000542	Horn for original electronics (ID-no < QT02400)
19	2	00000.3218	Screw M4x12
20a	1	-	Front wheel complete with white rim and grey tyre, no longer available
20b	1	9001994	Front wheel complete with grey rim and grey tyre
20c	1	9004159	Front wheel complete with grey rim and black tyre
21a	1	1015112	Outer tyre 12 1/2 x 2 1/4 grey block profile
21b	1	1015113	Outer tyre 12 1/2 x 2 1/4 black block profile
22	1	1015118	Inner tube 12 1/2 x 2 1/4
23	1	9002166	Hex bolt M8x150
24	2	00000.2203	Spring washer M8
25	1	00000.1702	Lock nut M8
26	1	9000504	Front fork, complete
-	2	9000493	Ball-head bearing 6004 2NSE
-	2	00000.5500	Ball bearing 6002 2NSL

02 Front frame, front suspension and front wheels Trophy 4W



Pos	Qty	Article number	Description
1	1	1010287	Front frame, incl. ball-head bearings Trophy 4W
2	4	00000.1703	Lock nut M10 D985
3	2	9002090	Swing arm top assy (grey)
3	2	9004458	Swing arm top assy (black)
4	2	00000.3218	Screw M4x12
5	1	9000542	Horn for original electronics (ID-no < QT02400)
6	2	9001641	Shock absorber
7	2	9002091	Swing arm low assy (grey)
7	2	9004459	Swing arm low assy (black)
8	1	9001895	Connection plate
9	4	001.03010.001	Hex bolt M10x40 D931
10	2	9001803	Axle suspension parallel bracket
11	2	9002101	Steer rod
12	1	9001802	Steer shaft
13	8	00000.1702	Lock nut M8
14	1	9001795	Wheel bracket left (grey)
14	1	9003406	Wheel bracket left (black)
15	1	9001801	Wheel bracket right (grey)
15	1	9003408	Wheel bracket right (black)
16	2	00000.4307	Hex bolt M6x12
17	1	9001940	Bumper plate Trophy 4-wiel
18a	2	9001815	Front wheel complete with grey rim and grey tyre, Trophy 4W
18b	2	9004511	Front wheel complete with grey rim and black tyre, Trophy 4W
19a	2	1015112	Outer tyre 12 1/2 x 2 1/4 grey block profile
19b	2	1015113	Outer tyre 12 1/2 x 2 1/4 black block profile
20	2	1015118	Inner tube 12 1/2 x 2 1/4
21	2	9002006	Cover grey
22	2	9002155	Tensilock bolt Precote 85 M8x12
23	4	00000.1702	Lock nut M8
-	2	9000493	Ball-head bearing 6004 2NSE

03 Rear frame, drive unit and rear wheels

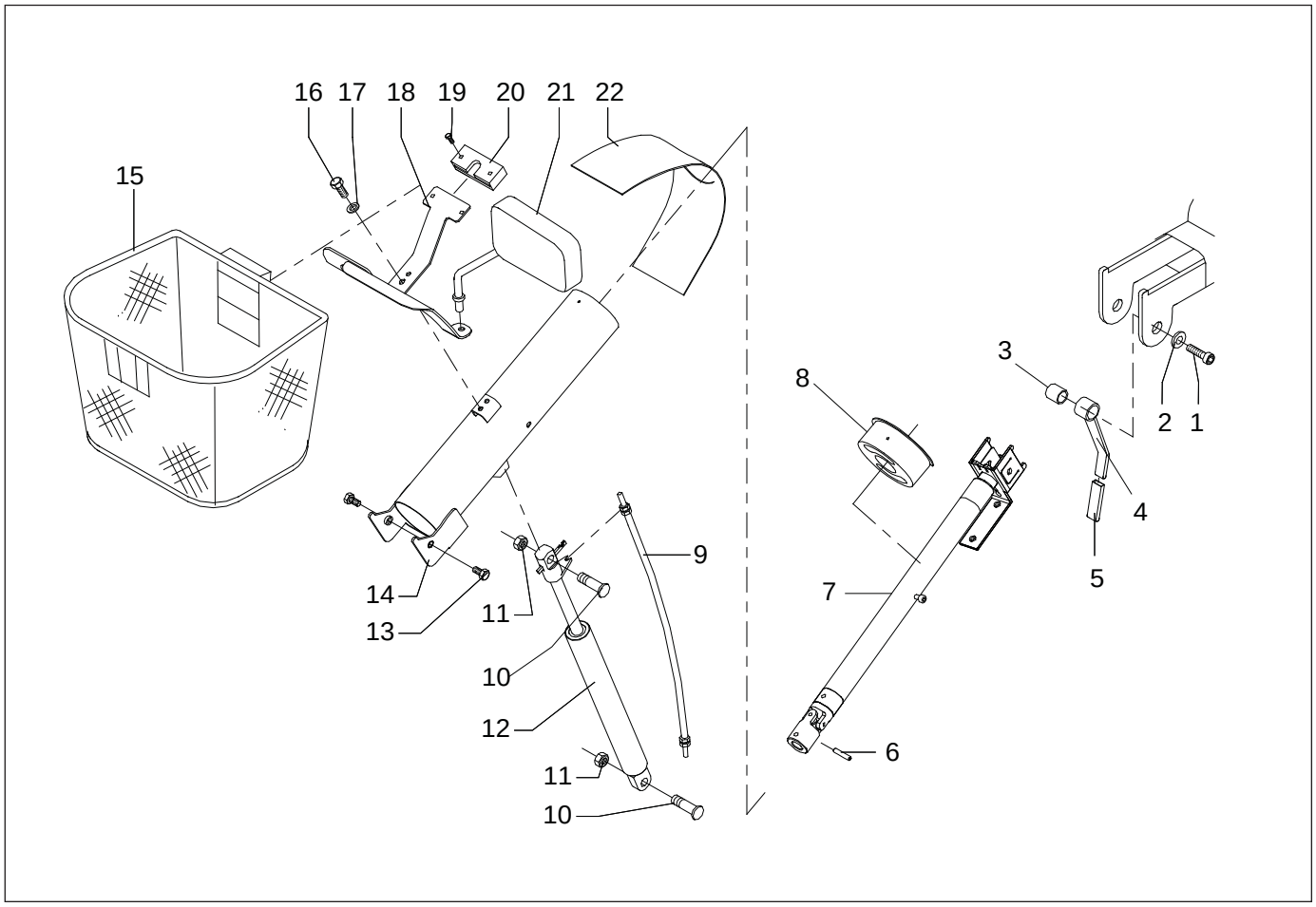


Pos	Qty	Article number	Description
1	4	1002646	Carbon brush for Trophy with Egis (8x10 mm)
1	4	103.00031.000	Carbon brush for Trophy with S-Drive (8x12 mm)
1	1	1011585	Carbon bruch set for CT transaxle (10x18 mm)
-	4	51035	Carbon brush screw cap for Schmid transaxle
2	1	1007947	Transaxle Schmid Trophy 3 and 4-wheel, Egis
2	1	1007961	Transaxle Trophy Alpine, Egis (max. 11 km/h)
2	1	1008565	Transaxle Trophy Alpine, S-Drive (max. 11 km/h)
2	1	1013184	Transaxle CT Trophy 3 and 4-wheel, S-Drive
3	4	00000.1703	Lock nut M10 D985
3	4	1013185	Lock nut low M10 D985
4	2	1012527	Hex. flange bolt M12x30 (torque 90Nm, use locktite 243)
5a	1	9000550	Rear wheel left side with brake drum, white rim and grey tyre
5b	1	9001996	Rear wheel left side with brake drum, grey rim and grey tyre
5c	1	1015104	Rear wheel left side with brake drum, grey rim and grey tyre with block profile
5d	1	9007719	Rear wheel left side with brake drum, grey rim and black tyre
5e	1	9007723	Rear wheel left side with brake drum, grey rim and black tyre with block profile
6a	1	9001172	Rear wheel left side standard, white rim and grey tyre
6b	1	9001998	Rear wheel left side standard, grey rim and grey tyre
6c	1	1015154	Rear wheel standard, grey rim and grey tyre with block profile
6d	1	9007717	Rear wheel left side standard, grey rim and black tyre
6e	1	9007721	Rear wheel left side standard, grey rim and black tyre with block profile
7a	1	9000549	Rear wheel right side with brake drum, white rim and grey tyre
7b	1	9001995	Rear wheel right side with brake drum, grey rim and grey tyre
7c	1	1015103	Rear wheel right side with brake drum, grey rim and grey tyre with block profile
7d	1	9007720	Rear wheel right side with brake drum, grey rim and black tyre
7e	1	9007724	Rear wheel right side with brake drum, grey rim and black tyre with block profile
8a	1	9001173	Rear wheel right side standard, white rim and grey tyre
8b	1	9001997	Rear wheel right side standard, grey rim and grey tyre

Continued from **03 Rear frame, drive unit and rear wheels**

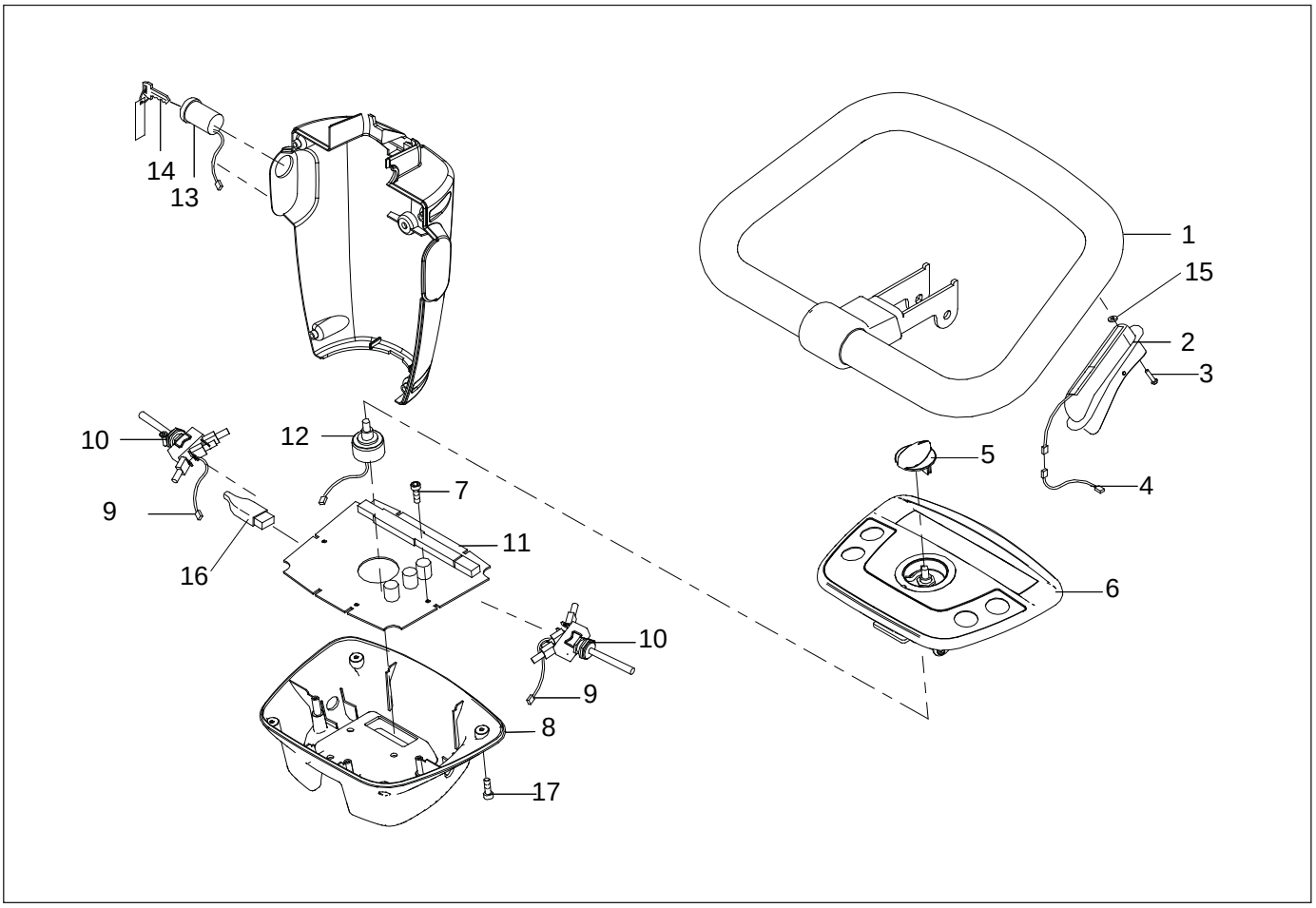
Pos	Qty	Article number	Description
8c	1	1015154	Rear wheel standard, grey rim and grey tyre with block profile
8d	1	9007718	Rear wheel right side standard, grey rim and black tyre
8e	1	9007722	Rear wheel right side standard, grey rim and black tyre with block profile
9a	2	1015114	Outer tyre 3.00x10 grey with highway profile
9b	2	1015102	Tyre grey with block profile rear wheel Trophy
9c	2	9007716	Tyre black rear wheel Trophy
9d	2	9007725	Tyre black with block profile rear wheel Trophy
10	2	1015119	Inner tube 3.00x10
11	2	1004272	Cover white
12	2	9002006	Cover grey
13	1	9000821	Magnet plate, speed sensor
14	1	9000642	Speed sensor magnet
15	1	00000.4009	Allen bolt M8x35
16	2	00000.1703	Lock nut M10 D985
17	1	9000603	Rear spring, standard (black)
17	1	9000683	Rear spring, heavy duty (black with orange sticker, previously chrome)
18	1	1002243	Allen bolt M10x75
19	4	00000.4307	Hex bolt M6x12
20	1	9000256	Mounting bracket, right mud guard
21	1	9000257	Mounting bracket, left mud guard
22	2	9000689	Rubber mounting strip, transaxle
23	1	1002242	Allen bolt M10x40
24	1	9000494	Back frame
25	2	1353	Hinge bush M8
26	2	103.00091.000	Wedge for Schmid transaxle
27	2	00000.3715	Buttonhead M8x30 ISO7380
28	2	9002221	Washer M8x30x1,5
29	2	00000.2003	Washer M8 DIN125A-VZ
30	2	00000.1702	Lock nut M8 DIN985/8/VZ
-	1	1003225	Motor brake, Egis
-	1	9003243	Motor brake, S-Drive
-	1	1012104	Motor brake for CT transaxle
-	1	1003209	Friction disk for motorbrake
-	1	1002576	Brake right for hand brake
-	1	1002577	Brake left for hand brake
-	2	9001171	Wheel hub standard
-	2	9000551	Wheel hub with drum brake
-	1	1012106	Freewheel lever for CT transaxle
-	1	1015444	Motorbrake cover Schmid
-	1	1001817	Hand brake

04 Steering column, mirror and basket



Pos	Qty	Article number	Description
1	1	00000.4041	Allen bolt M8x55
2	1	00000.2203	Spring washer M8
3	1	9000019	Spacing bush
4	1	9000648	Handle, steering adjustment
5	1	9000781	Cap, steering adjustment handle
6	1	00001.0804	Rolled pin 6x30
7	1	9001095	Steering column adjustment tube
8	1	1008573	Nylon bushing, steering column
9	1	9000610	Control cable, gas spring for steering adjustment
10	2	9000826	Shoulder bolt, gas spring
11	2	00000.1701	Lock nut M6
12	1	9000684	Gas spring, steering adjustment inc. operating mechanism
13	2	9008687	Hex bolt Precote 85 M8x25
14	1	9000435	Cylinder, steering column
15	1	9001135	Basket, front side (max. load 5 kg)
16	2	00000.4307	Hex bolt M6x12
17	2	00000.2202	Spring washer M6
18	1	9000732	Support
19	2	00000.3612	Screw M4x10
20	1	9000704	Basket holder
21	1	1010832	Mirror, black (left side)
22	1	9000601	Cover plate, steering adjustment

05a Console, printed circuit board and throttle control for original electronics (ID-no < QT02400)

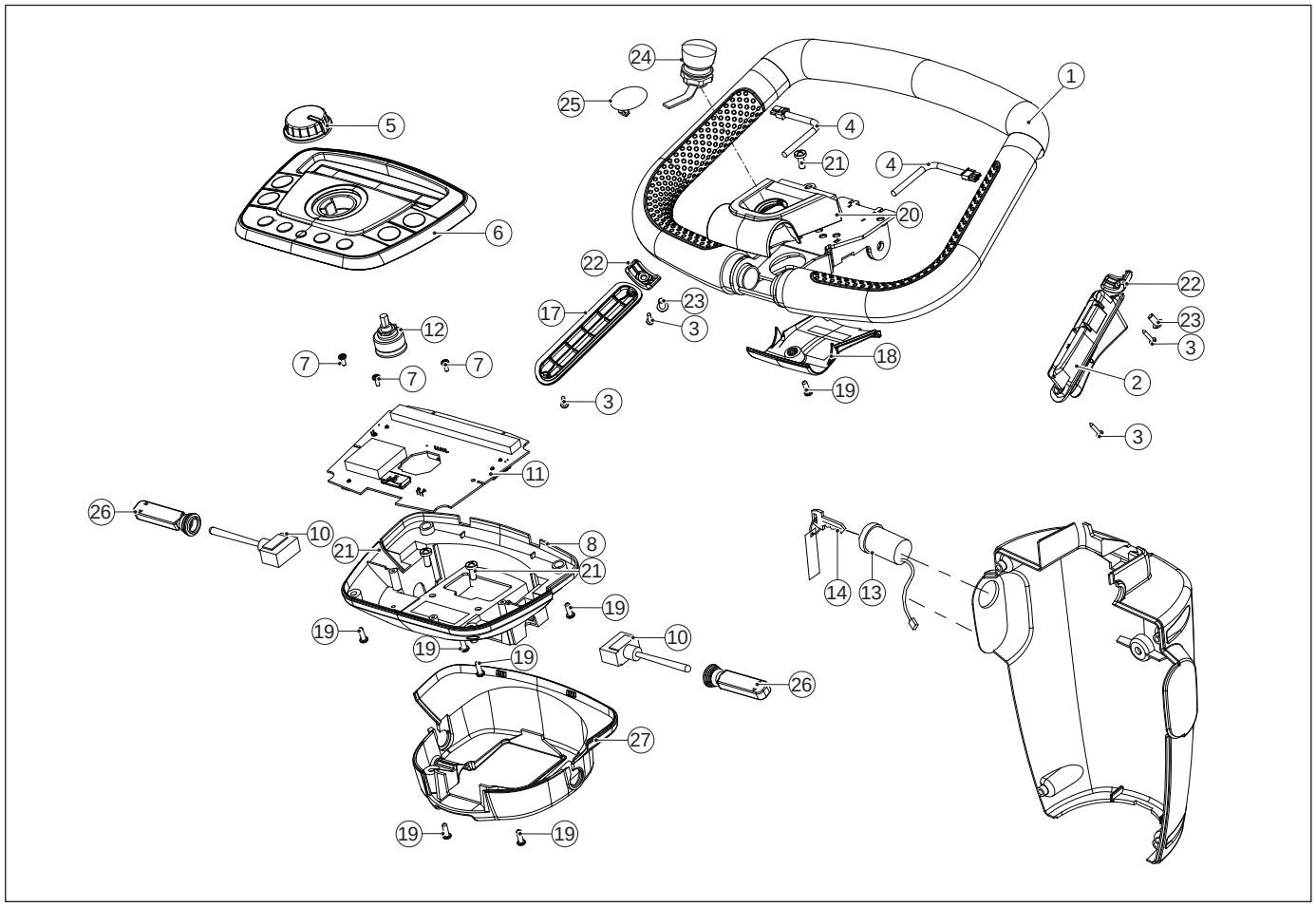


Pos	Qty	Article number	Description
1	1	1008345	Steering wheel with throttle left Egis
1	1	1008342	Revision steering wheel with throttle left Egis
1	1	1008346	Steering wheel with throttle right Egis
1	1	1008343	Revision steering wheel with throttle right Egis
1	1	1008347	Steering wheel with dual throttle Egis
1	1	1008344	Revision steering wheel with dual throttle Egis
1	1	1008603	Steering wheel with throttle left S-Drive
1	1	9002671	Revision steering wheel with throttle left S-Drive
1	1	1008604	Steering wheel with throttle right S-Drive
1	1	9002672	Revision steering wheel with throttle right S-Drive
1	1	1008601	Steering wheel with dual throttle S-Drive
1	1	9002673	Revision steering wheel with dual throttle S-Drive
2	2	1008055	Potentiometer, accelerator
3	4	00000.3307	Sheet-metal screw 2,9x13
5	1	1001341	Knob, speed potentiometer
6	1	1002555	Console, upper (standard) for original electronics (ID-no < QT02400)
7	3	9002792	Screw Ejot K30x6
8	1	9000481	Console, lower
9	2	9000531	Cable, indicator switch
10	2	9000522	Indicator switch for original electronics (ID-no < QT02400)
11	1	9000496	PCB, console for original electronics (ID-no < QT02400)
12	1	9002182	Speed potentiometer Egis for original electronics (ID-no < QT02400)
12	1	9006110	Speed potentiometer S-Drive for original electronics (ID-no < QT02400)
13	1	9006111	Ignition lock, > 31-10-2011 for original electronics (ID-no < QT02400)
13	1	9002188	Harness for ignition lock Egis for original electronics (ID-no < QT02400)
13	1	9006998	Ignition lock / tiller cover bottom, replacement set, Trophy < 01-11-2011
13	1	9006999	Ignition lock / tiller cover bottom with switch hole, replacement set, Trophy < 01-11-2011
14	2	1008307	Ignition key for original electronics (ID-no < QT02400)
14	2	1002571	Ignition key (Old type A126)

Continued from **05a Console, printed circuit board and throttle control for original electronics (ID-no < QT02400)**

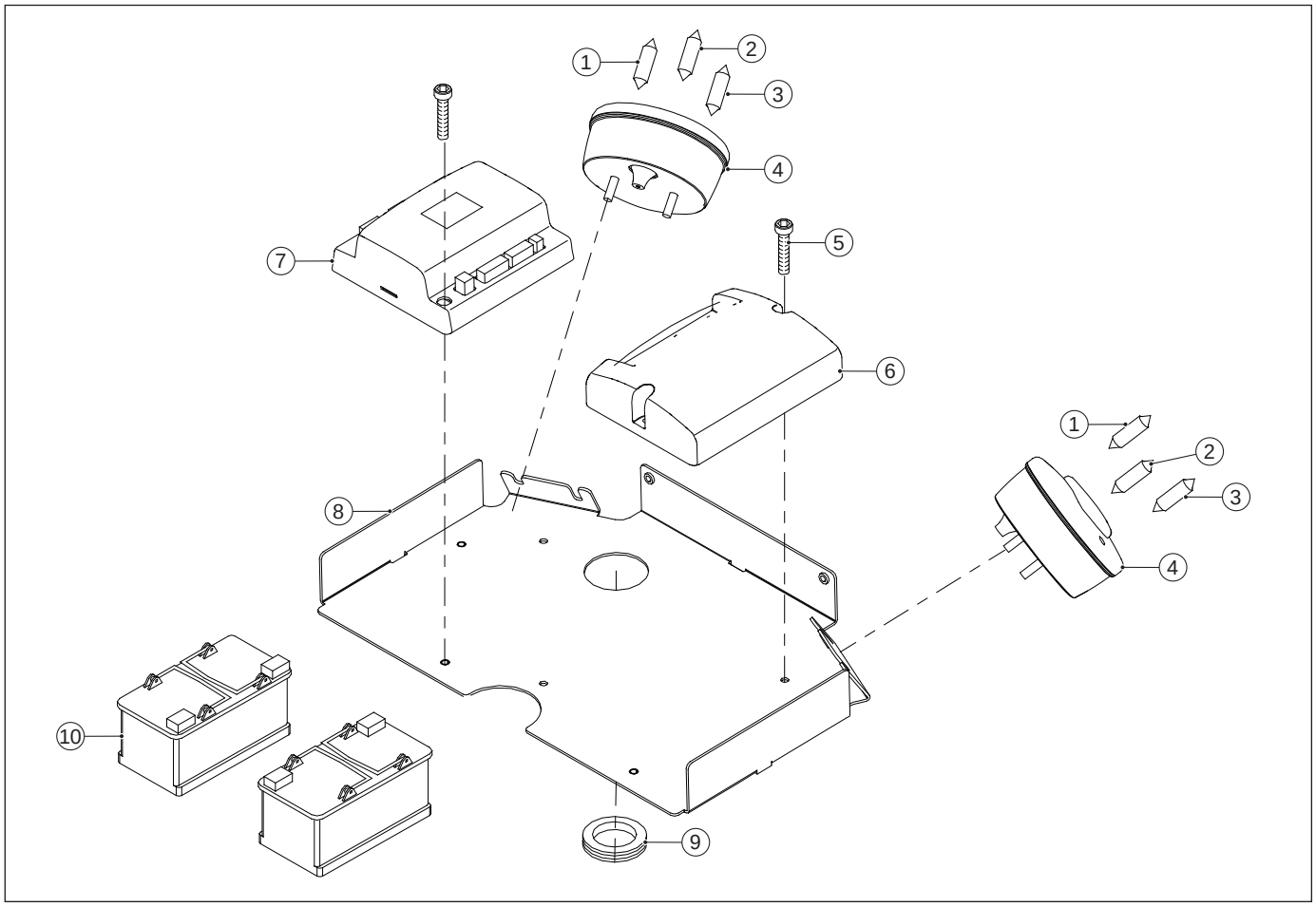
Pos	Qty	Article number	Description
14	2	9005810	Ignition key > 31-10-2011
15	4	9002104	Spacer 3.2x5.5x2.2
16	2	9002177	Throttle control dummy
17	4	1002343	Screw Ejot K40x12
-	2	9001230	Cover steering wheel

05b Console, printed circuit board and throttle control for advanced electronics (ID-no > QT02400)



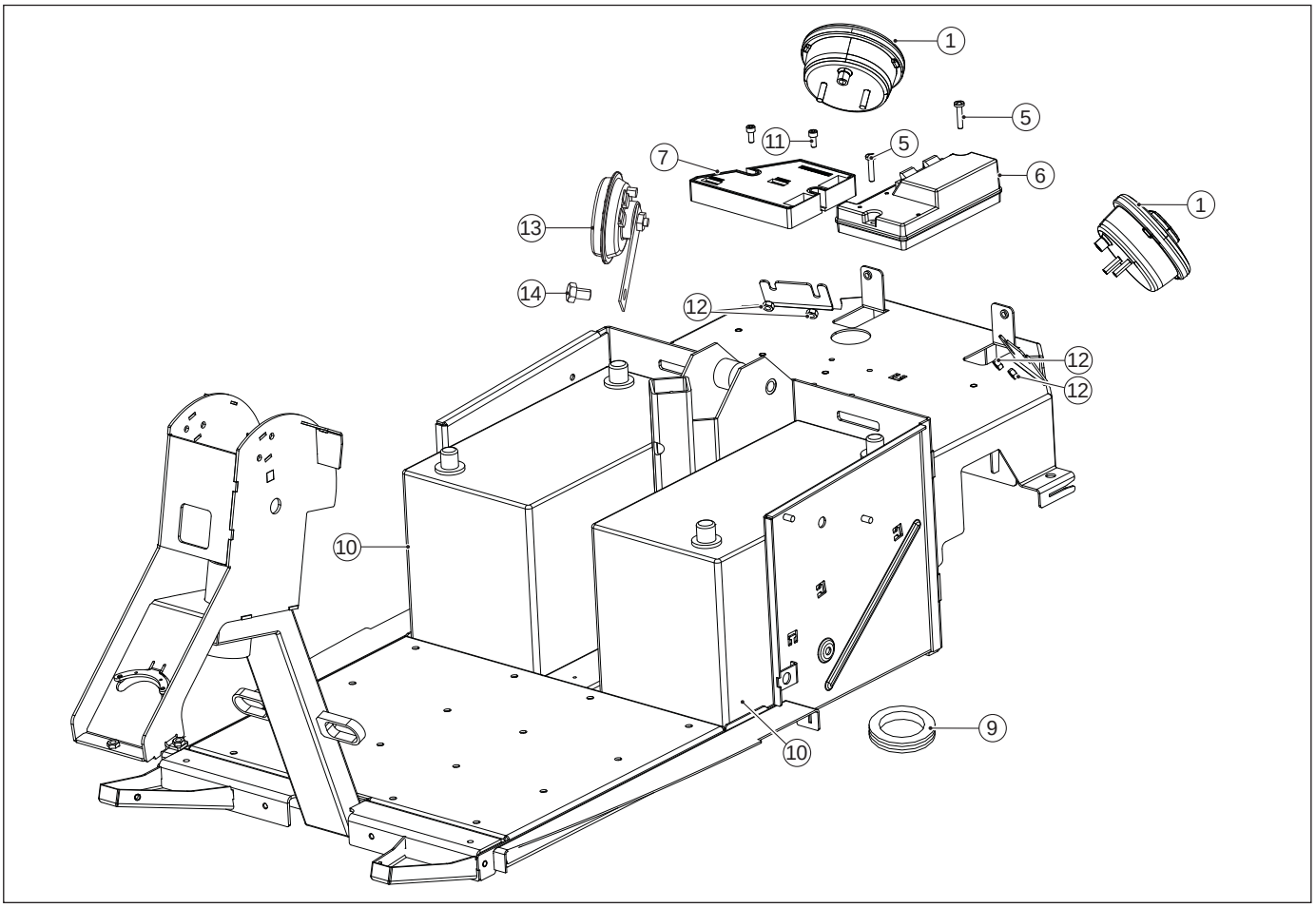
Pos	Qty	Article number	Description
1	1	9004185	Steering wheel
2	1	1008055	Potentiomet accelerator
3	4	00000.3307	Sheet-metal screw 2,9x13
4	2	9004641	Throttle harness
5	1	1012536	Assy Dashboard speed knob
6	1	9007568	Assy Top Standard for advanced electronics (ID-no > QT02400)
6	1	1012535	Assy Top Full option for advanced electronics (ID-no > QT02400)
7	3	9002792	Screw Ejot K30x6
8	1	9007223	Console Bottom
10	2	9004435	Indicator switch for advanced electronics (ID-no > QT02400)
11	1	9008789	Tiller PCB Basic for advanced electronics (ID-no > QT02400)
11	1	9008791	Tiller PCB Dual Control for advanced electronics (ID-no > QT02400)
11	1	9008790	Tiller PCB Full Option for advanced electronics (ID-no > QT02400)
12	1	9004438	Speed switch for advanced electronics (ID-no > QT02400)
13	1	9004432	Ignition switch for advanced electronics (ID-no > QT02400)
14	1	9005810	Ignition key for advanced electronics (ID-no > QT02400)
17	1	9007423	Cover steering wheel
18	1	9004302	Steering wheel cover bottom
19	7	9005802	Srew Ejot K40x12
20	1	9004301	Steering wheel cover top
21	3	00000.3200	Recessed buttonhead screw M5x12
22	2	9004331	Cover brake position
23	2	00000.3719	Buttonhead screw M5x10
24	1	9006138	Emergency stop button
25	1	9000904	Emergency stop button dummy
26	2	9004303	Cover for indicator switch
27	1	9006980	Cover Steering Console
28	1	1016535	Full option steering wheel for advanced electronics (ID-no > QT02400)
-	1	1016928	Replacement set Basic
-	1	1016930	Replacement set Dual control
-	1	1016929	Replacement set Full options

06a Wiring, electronics and batteries for original electronics (ID-no < QT02400)



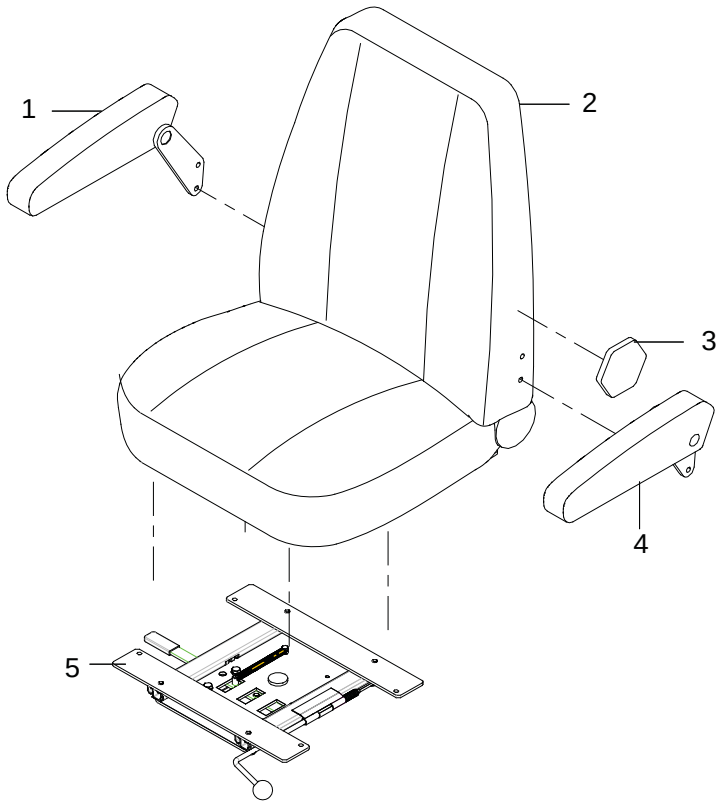
Pos	Qty	Article number	Description
1-4	2	1009814	Replacement Set 2 LED rear lights
5	4	00000.3204	Screw M5x25
6	1	1008074	Controller, Egis 110A
6	1	9002457	Controller S-Drive 120A (from serial number LT03210) (11-09-2008)
6	1	1012504	Controller S-Drive 140A (from serial number PT01331) (24-03-2011)
7	1	1002558	Controller interface for original electronics (ID-no < QT02400)
8	1	9000647	Mounting plate, Electronics (only needed on old frame)
9	1	9000782	Tulle 32 x 1.6
10	2	9002759	Battery MK (50Ah C5) (60Ah C20)
10	2	9002761	Battery MK (72Ah C5) (86Ah C20)

06b Wiring, electronics and batteries for advanced electronics (ID-no > QT02400)



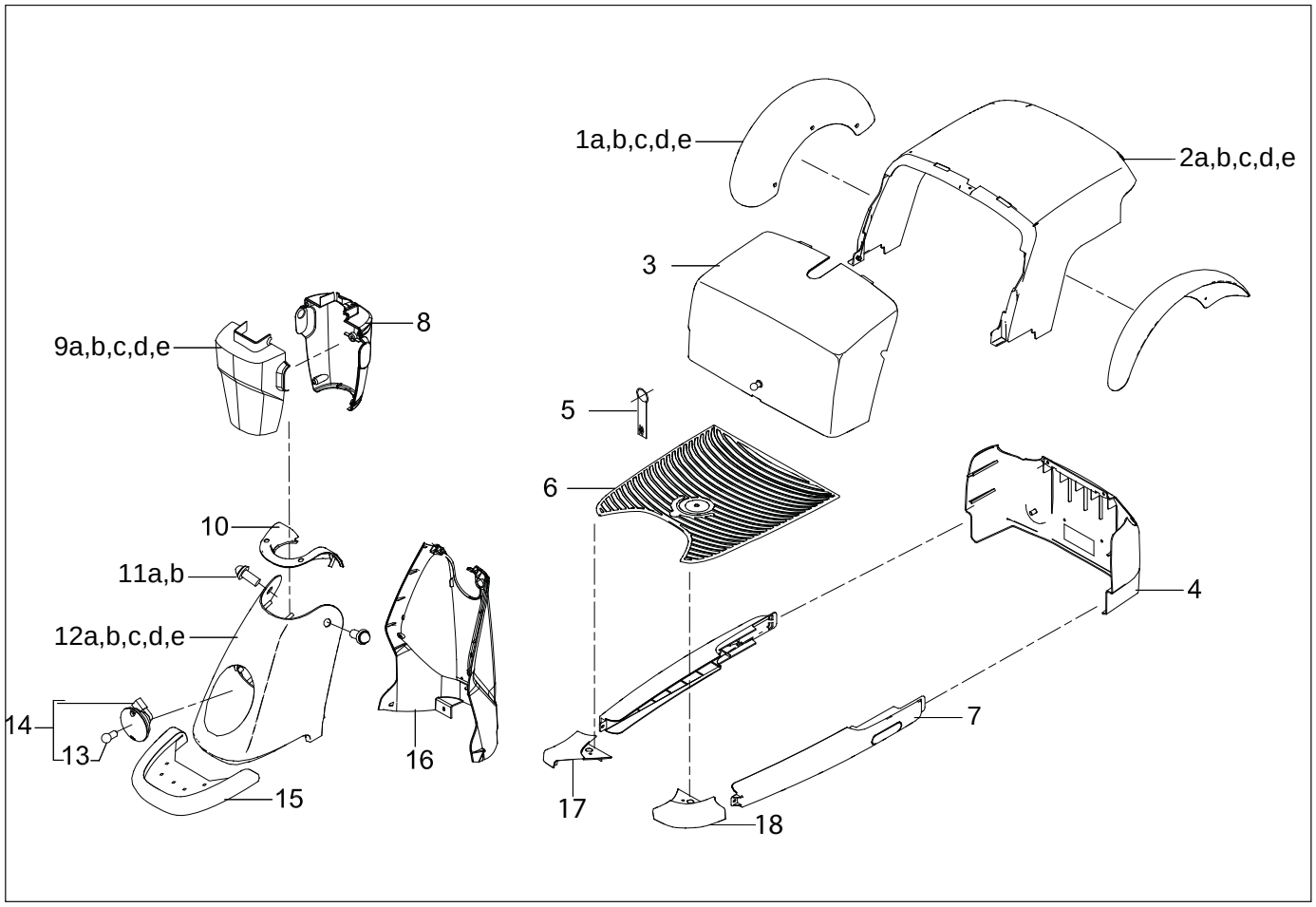
Pos	Qty	Article number	Description
1	2	9004503	Rear light LED
5	2	00000.3204	Screw M5x25
6	1	1012504	Controller S-Drive 140A
7	1	9008778	Controller interface for advanced electronics (ID-no > QT02400)
9	1	9000782	Tulle 32 x 1.6
10	2	9002759	Battery MK (50Ah C5) (60Ah C20)
10	2	9002761	Battery MK (72Ah C5) (86Ah C20)
11	2	00000.4036	Screw M5x12
12	4	00000.1501	Hexagon nut M6
13	1	9004433	Horn for advanced electronics (ID-no > QT02400)
14	1	00000.4322	Hexagon bolt M8x12
15	1	1012412	Connector cover
16	2	9002752	Set battery connection covers

07 Seat and seat post



Pos	Qty	Article number	Description
1	1	118.00221.000	Armrest, right
2	1	1002861	Master seat with armrests
3	1	1003383	Lumbar knob
4	1	118.00231.000	Armrest, left
5	1	9000034	Seat frame with slider (right-side operation)
-	1	9000042	Seat fixation strip
-	1	1366	Plastic cover for seat fixation strip
-	1	1002241	Master seat with seat frame
-	1	1008392	Master seat comfort (Enschede) with seat frame
-	1	1002392	Master seat Fabric with seat frame and rain cover
-	2	232.00011.000	Headrest receiver
-	1	237.00011.000	Headrest
-	1	1001806	Height adjustable armrests, stepless (19-33 cm), extra long (40 cm) and soft
-	1	1002394	Height adjustable armrests, 20 (standard), 22 and 24 cm
-	1	1008411	Rain cover Master seat

08 Covers Trophy 3W

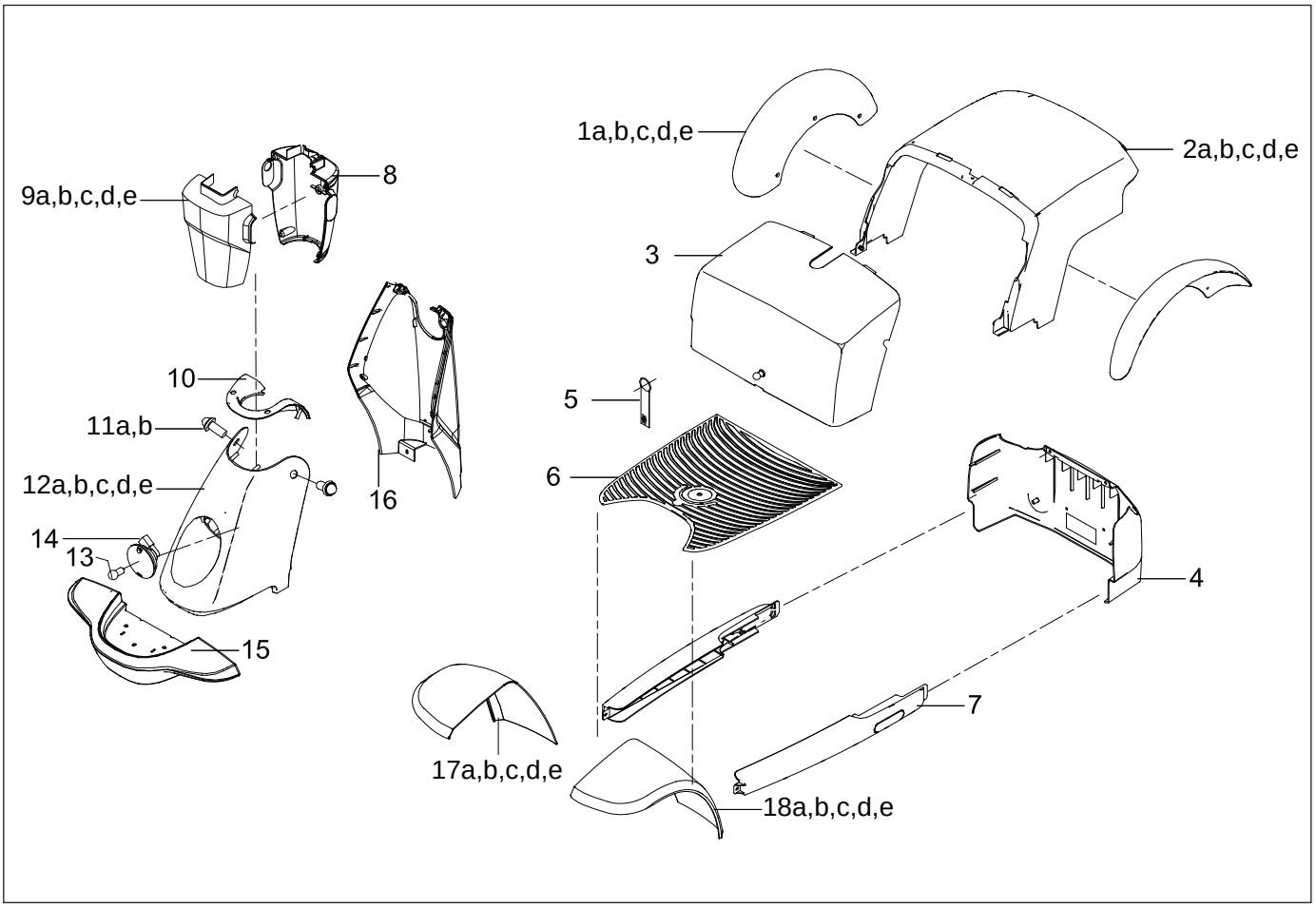


Pos	Qty	Article number	Description
1a	2	1001905	Mudguard Red metallic
1b	2	1015765	Mudguard Moonstone blue metallic
1c	2	1015770	Mudguard Sparkling champagne metallic
1d	2	1015775	Mudguard Platinum white metallic
1e	2	1015780	Mudguard Graphite black metallic
2a	1	1007754	Rear cover assy Red metallic
2b	1	1015760	Rear cover assy Moonstone blue metallic
2c	1	1015761	Rear cover assy Sparkling champagne metallic
2d	1	1015762	Rear cover assy Platinum white metallic
2e	1	1015763	Rear cover assy Graphite black metallic
3	1	1007757	Battery cover assy
4	1	1007755	Rear bumper assy
5	1	1001276	Rubber strap, battery cover
6	1	9002229	Plateau mat
7	1	1009940	Side skirt assy black, set (replacement set)
8	1	9006856	Rear cover, steering column black > 31-10-2011
8	1	9006997	Rear cover, steering column black. with hole for switch > 31-10-2011
8	1	9006998	Ignition lock / tiller cover bottom, replacement set, Trophy < 01-11-2011
8	1	9006999	Ignition lock / tiller cover bottom with switch hole, replacement set, Trophy < 01-11-2011
9a	1	1001895	Front cover, steering column Red metallic
9b	1	1015766	Front cover, steering column Moonstone blue metallic
9c	1	1015771	Front cover, steering column Sparkling champagne metallic
9d	1	1015776	Front cover, steering column Platinum white metallic
9e	1	1015781	Front cover, steering column Graphite black metallic
10	1	9000486	Front cover, front portion
11a	2	9000543	Indicator light 12V for originial electronics (ID-no < QT02400)
11b	2	9007552	Indicator light 24V for advanced electronics (ID-no > QT02400)
-	2	9002236	Foam ring for indicator
12a	1	1001899	Front cover Red metallic

Continued from **08 Covers Trophy 3W**

Pos	Qty	Article number	Description
12b	1	1015767	Front cover Moonstone blue metallic
12c	1	1015772	Front cover Sparkling champagne metallic
12d	1	1015777	Front cover Platinum white metallic
12e	1	1015782	Front cover Graphite black metallic
13	1	9000536	Spherical bulb 24V 21W
14	1	9000535	Headlight, complete
14	1	1010852	Headlight, complete (Version 2, from 11-11-2010)
15	1	1009956	Front bumper Trophy 3W
16	1	9000485	Front cover, rear portion Trophy 3W
17	1	1009947	Foot support, right
18	1	1009946	Foot support, left
19	1	1009941	Foot support set (replacement set)
-	1	9000426	Logo Trophy
-	1	1012522	Logo Handicare
-	2	00000.1503	Reflector red round 60 mm

09 Covers Trophy 4W

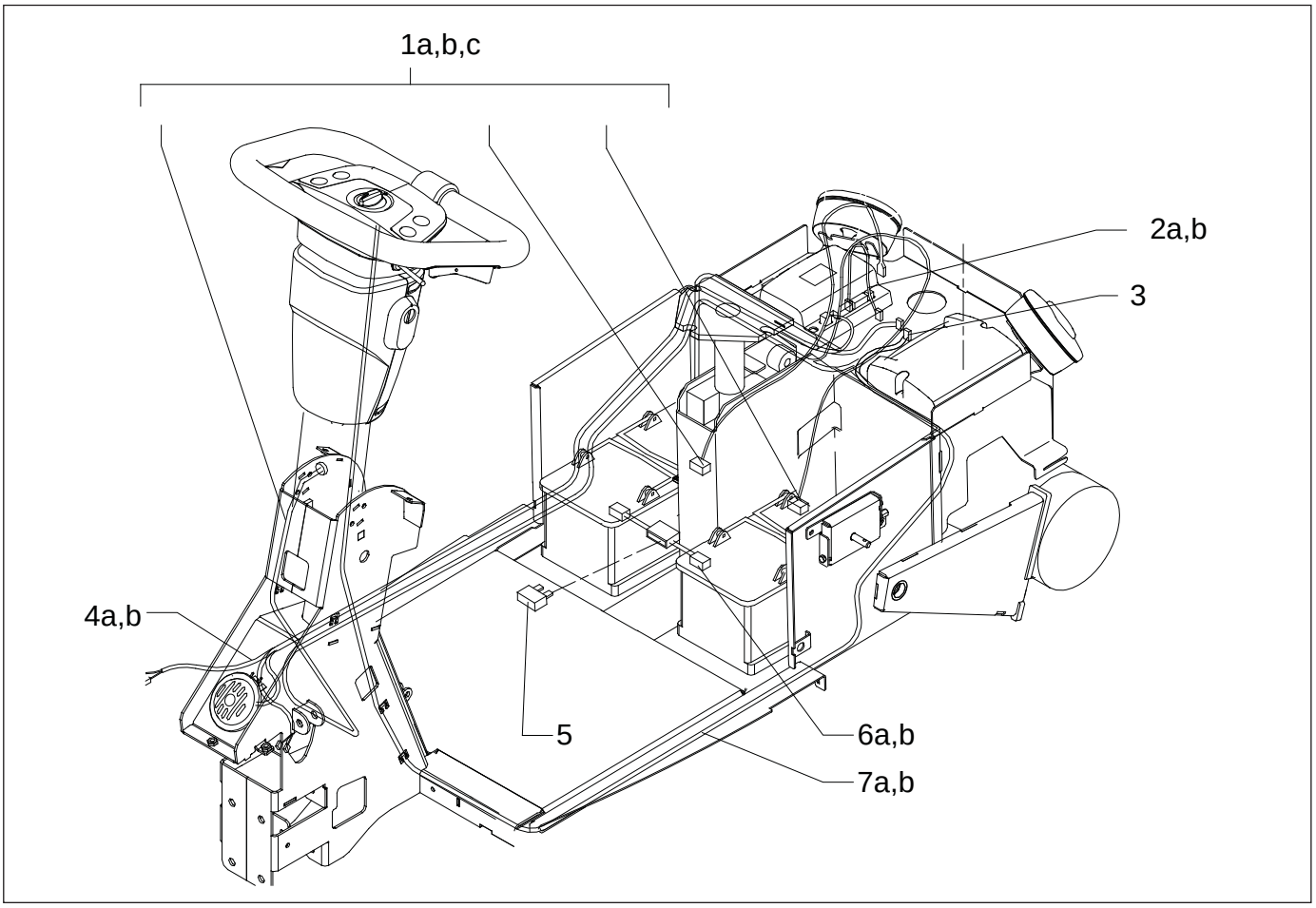


Pos	Qty	Article number	Description
1a	2	1001905	Mudguard Red metallic
1b	2	1015765	Mudguard Moonstone blue metallic
1c	2	1015770	Mudguard Sparkling champagne metallic
1d	2	1015775	Mudguard Platinum white metallic
1e	2	1015780	Mudguard Graphite black metallic
2a	1	1007754	Rear cover assy Red metallic
2b	1	1015760	Rear cover assy Moonstone blue metallic
2c	1	1015761	Rear cover assy Sparkling champagne metallic
2d	1	1015762	Rear cover assy Platinum white metallic
2e	1	1015763	Rear cover assy Graphite black metallic
3	1	1007757	Battery cover assy
4	1	1007755	Rear bumper assy
5	1	1001276	Rubber strap, battery cover
6	1	9002230	Plateau mat
7	1	1009940	Side skirt assy black, set (replacement set)
8	1	9006856	Rear cover, steering column black > 31-10-2011
8	1	9006997	Rear cover, steering column black. with hole for switch > 31-10-2011
8	1	9006998	Ignition lock / tiller cover bottom, replacement set, Trophy < 01-11-2011
8	1	9006999	Ignition lock / tiller cover bottom with switch hole, replacement set, Trophy < 01-11-2011
9a	1	1001895	Front cover, steering column Red metallic
9b	1	1015766	Front cover, steering column Moonstone blue metallic
9c	1	1015771	Front cover, steering column Sparkling champagne metallic
9d	1	1015776	Front cover, steering column Platinum white metallic
9e	1	1015781	Front cover, steering column Graphite black metallic
10	1	9000486	Front cover, front portion
11a	2	9000543	Indicator light 12V for originial electronics (ID-no < QT02400)
11b	2	9007552	Indicator light 24V for advanced electronics (ID-no > QT02400)
-	2	9002236	Foam ring for indicator
12a	1	1001899	Front cover Red metallic

Continued from **09 Covers Trophy 4W**

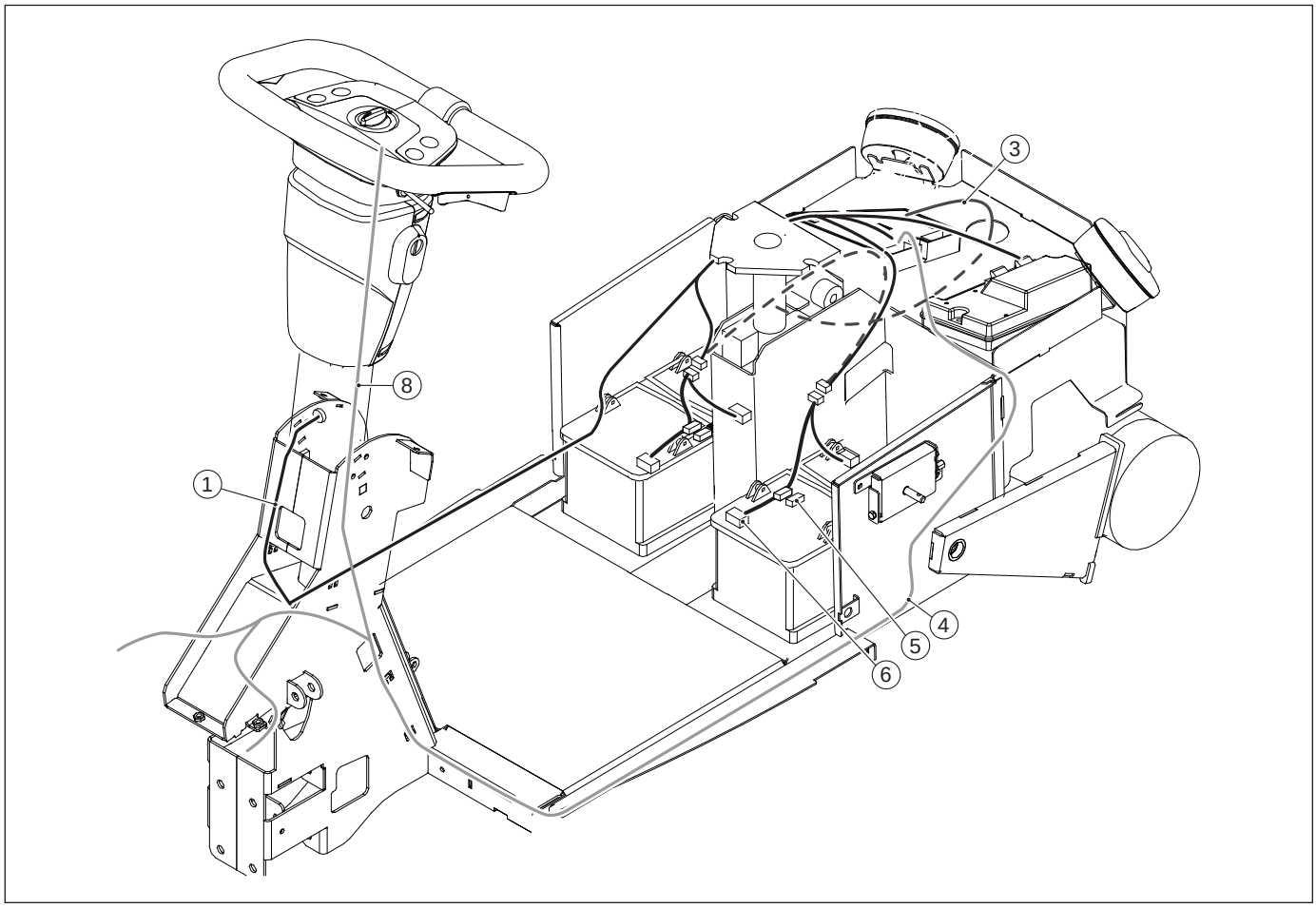
Pos	Qty	Article number	Description
12b	1	1015767	Front cover Moonstone blue metallic
12c	1	1015772	Front cover Sparkling champagne metallic
12d	1	1015777	Front cover Platinum white metallic
12e	1	1015782	Front cover Graphite black metallic
13	1	9000536	Spherical bulb 24V 21W
14	1	9000535	Headlight, complete
14	1	1010852	Headlight, complete (Version 2, from 11-11-2010)
15	1	9001970	Front bumper Trophy 4W
16	1	9001921	Front cover, rear portion Trophy 4W
17a	1	9001963	Mudgard right hand front Red metallic
17b	1	1015768	Mudgard right hand front Moonstone blue metallic
17c	1	1015773	Mudgard right hand front Sparkling champagne metallic
17d	1	1015778	Mudgard right hand front Platinum white metallic
17e	1	1015783	Mudgard right hand front Graphite black metallic
18a	1	9001964	Mudgard left hand front Red metallic
18b	1	1015769	Mudgard left hand front Moonstone blue metallic
18c	1	1015774	Mudgard left hand front Sparkling champagne metallic
18d	1	1015779	Mudgard left hand front Platinum white metallic
18e	1	1015784	Mudgard left hand front Graphite black metallic
-	1	9000426	Logo Trophy
-	1	1012522	Logo Handicare
-	2	00000.1503	Reflector red round 60 mm

10a Cabling for original electronics (ID-no < QT02400)



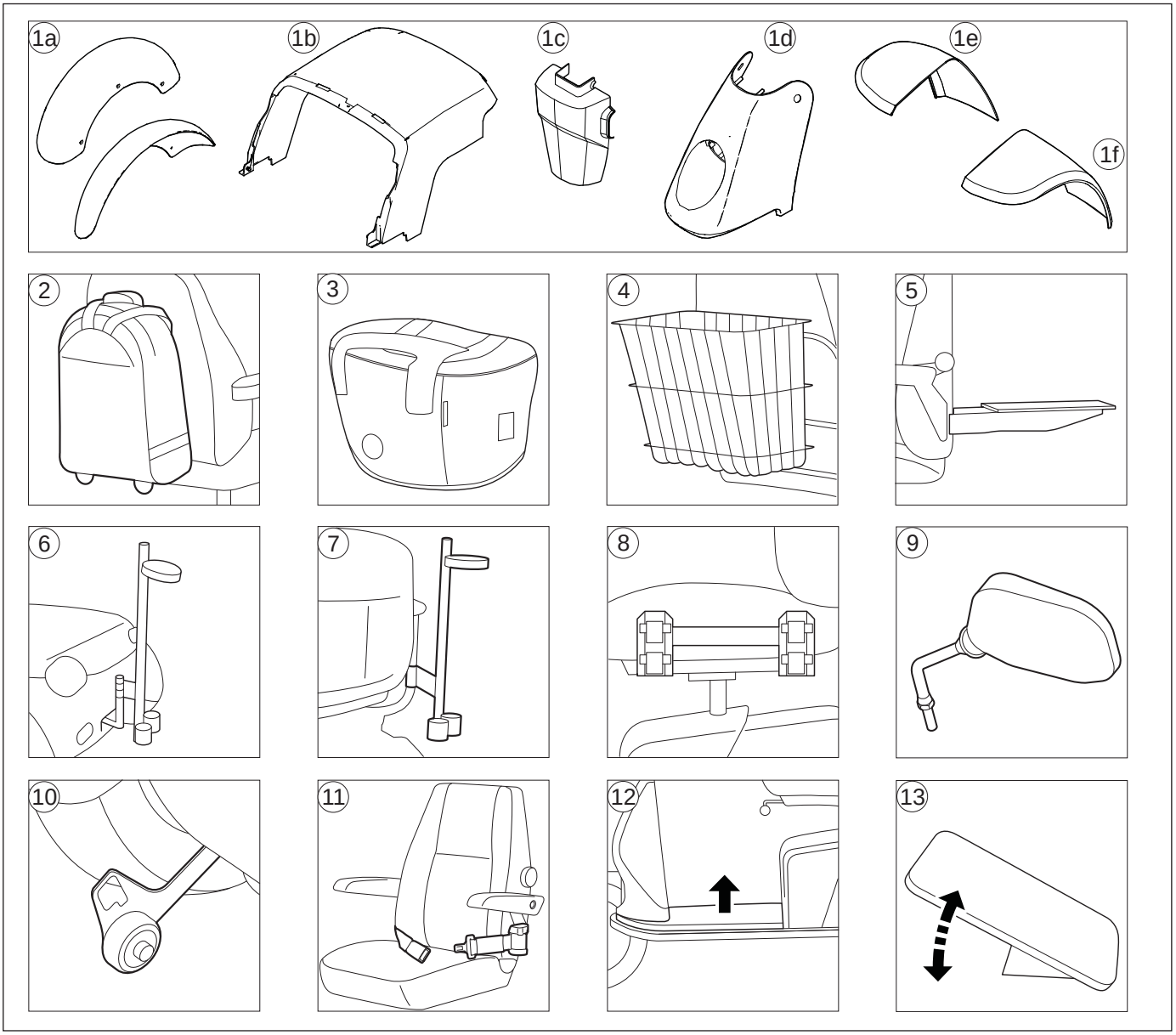
Pos	Qty	Article number	Description
1a	1	9000783	Power cable complete with charge socket, Egis for original electronics (ID-no < QT02400)
1b	1	9002449	Power cable complete with charge socket and quick release clamps, S-Drive for original electronics (ID-no < QT02400)
1c	1	9004029	Power cable complete with charge socket and ring lugs, S-Drive
2a	1	9002181	Cable harness, interface/Egis for original electronics (ID-no < QT02400)
2b	1	9002190	Cable harness, interface/Egis for footcontrol for original electronics (ID-no < QT02400)
3	1	9004431	Speed sensor with cable
4a	1	9000537	Main harness, lighting for original electronics (ID-no < QT02400)
4b	1	9004653	Main harness, lighting for version 2, from 11-11-2010 till original electronics (ID-no < QT02400)
5	1	99117	Fuse 100A
6a	1	9000526	Battery cable, series connection (incl. terminal clamp) for original electronics (ID-no < QT02400)
6b	2	9006564	Batterry cable with ring lugs
7a	1	9002180	Main cable Egis for original electronics (ID-no < QT02400)
7b	1	9002460	Main cable S-Drive for original electronics (ID-no < QT02400)
-	2	9000774	Battery connector red for original electronics (ID-no < QT02400)
-	2	9000775	Battery connector black for original electronics (ID-no < QT02400)

10b Cabling for advanced electronics (ID-no > QT02400)



Pos	Qty	Article number	Description
1	1	9004029	Power cable complete with charge socket and ring lugs, S-Drive
2	-	-	-
3	1	9004431	Speed sensor
4	1	9004429	Main Harness for advanced electronics (ID-no > QT02400)
5	2	99117	Fuse 100A
6	2	9006564	Batterry cable with ring lugs
7	-	-	-
8	2	9007367	Indicator extension harness for advanced electronics (ID-no > QT02400)

4,3 Options



Pos	Qty	Article number	Description
1a-1d	1	1017464	Colour exchange set Red metallic 3W
1a-1d	1	1017458	Colour exchange set Moonstone blue metallic 3W
1a-1d	1	1017459	Colour exchange set Sparkling champagne metallic 3W
1a-1d	1	1017460	Colour exchange set Platinum white metallic 3W
1a-1d	1	1017461	Colour exchange set Graphite black metallic 3W
1a-1f	1	1017463	Colour exchange set Red metallic 4W
1a-1f	1	1017415	Colour exchange set Moonstone blue metallic 4W
1a-1f	1	1017416	Colour exchange set Sparkling champagne metallic 4W
1a-1f	1	1017417	Colour exchange set Platinum white metallic 4W
1a-1f	1	1017418	Colour exchange set Graphite black metallic 4W
2	1	1015545	Trolleybag
-	1	9000620	Bracket for trolleybag
3	1	9000703	Front bag
4	1	4930	Rear basket
5	1	1001813	Luggage carrier for seat frame
-	1	1001814	Walking aid bracket for chassis mounting (not for Gemino)
-	1	A810	Walking aid bracket for chassis mounting (for Gemino)
6	1	1001754	Cane holder mounted to chassis
7	1	2537	Cane holder mounted to chair, vertical
8	1	1003095	Cane holder mounted to chair, horizontal

Continued from **4,3 Options**

Pos	Qty	Article number	Description
-	1	1003097	Clamp for cane and crutch holder (diameter 20 - 30 mm)
9	1	1010833	Mirror right
-	1	9000752	Bracket for mirror right
-	1	1002421	Mirror right with mounting bracket
10	1	9000436	Anti tip wheel left
10	1	9000437	Anti tip wheel right
11	1	1015507	Lap strap with roll-up for Master Seat
-	1	4824	Retractable seat belt
12	1	1001752	Elevated footplate for SH 35 - 42 cm
13	1	1001753	Angle adjustable footrest, range of 0° til 50° (not i.c.w. 4-wheel)
-	1	9000825	Adjustment tool for rear spring
-	1	1001809	Foot throttle Egis for originial electronics (ID no < QT02400)
-	1	1008572	Foot throttle S-Drive for originial electronics (ID no < QT02400)
-	1	9007569	Assy foot throttle incl. assy top full option for advanced electronics (ID no > QT02400)
-	1	9007499	Assy foot throttle for advanced electronics (ID no > QT02400)
-	1	1015595	Tom Tom bracket

5 Service instructions

This document is a reference book to be used to order parts for the scooter model shown on the front cover.

5.1 Maintenance plan

Below, we have indicated what needs to be checked, how often this should be done and by whom.

Time	Description	To be carried out by	
		User	Dealer
Daily	Charging the batteries, after each use	x	-
Weekly	Checking the tyre pressures	x	-
Monthly	Cleaning the scooter	x	-
	Cleaning the upholstery (if necessary)	x	-
Every three months	Grease the seat's swivel mechanism: the seat needs to be removed for this. See 'Removing the seat'. Lithium grease is recommended	x	x (Annually)
Annually	Inspecting the electrical system	-	x
	Checking the batteries	-	x
	Inspecting the drive. (see 7.6)	-	x
	Inspecting the mechanical parts	-	x
	Inspecting the bearings	-	x
	Inspecting the suspension	-	x
	Checking the tyres	-	x
	Checking all fastenings and bolts: tighten if necessary	-	x
	Sign the inspection record table in the user manual	-	x

It is recommended that the dealer carries out a service on the scooter at least once a year. If the scooter is used intensively, the service should be carried out every six months.

Maintenance requirement for re-use
Disinfect surfaces with commercially available disinfectants and clean the surfaces with damp cloths and cleaners tuned.

⚠ ***Warning***
Do not use high pressure cleaners or similar to clean the product!

The following work most be carried out before re-use:

	Annual inspection						
	1	2	3	4	5	6	7
Electronics							
On / off switch							
Output connector							
Operation							
Brake							
Programmable settings							
Batteries							
Level							
Connections							
Capacity test							
Wheels and tyres							
Tread depth							
Pressure							
Bearings							
Wheel fixing nuts							
Motors							
Cables							
Noise							
Connections							
Brake							
Brushes							

	Annual inspection						
	1	2	3	4	5	6	7
Chassis							
Condition							
Steering							
Seating							
Seat							
Backrest							
Armrests							
Electrical							
Harnesses							
Connections							
Lighting system							
Test							
Forwards							
Backwards							
Emergency stop							
Left turn							
Right turn							
Uphill / downhill							
Obstacle							
Brake							
List of necessary repairs:							

⚠ ***Warning***
Pull the charge cable out of the battery charging connection of the scooter before carrying out any maintenance on the scooter.

5.2 Batteries

Always follow the instructions related to battery maintenance & storage as given by the battery manufacturer (🕮 Battery charger).

The scooter is equipped with gel batteries. These batteries are fully encased and sealed and require no maintenance. A sticker indicates how the batteries are to be connected. This sticker is located on the rear cover and on the battery cable.

⚠ ***Warning***
Ensure that the batteries are always well charged.

Do not use the scooter if the batteries are almost flat. Doing so may damage the batteries and means you run the risk of coming to an unexpected standstill.

Ensure that the batteries are never completely flat. This can seriously damage the batteries and shorten their lifespan.

Only use gel-batteries

Replacing the batteries
If battery capacity is so low (after fully charging) that the scooter can only make short trips, or can not be driven at all, then the batteries have reached the end of their lifespan. Replace the batteries as soon as possible.

⚠ ***Warning***
Once the new batteries have been put in place they will need to be charged and 'run in' (🕮 Battery charger)

For the correct way to dispose of batteries see (🕮 Scooter) 'Used scooters and the environment'

Cleaning the batteries
Gel batteries are maintenance-free. However, attention may be paid to the following matters:

Note!
Ensure that the batteries remain clean and dry: dirt and water can cause leaks, as a result of which battery capacity can be reduced.

Clean the battery terminals and then grease them using acid-free Vaseline.

5.3 Tyres

To ensure that your scooter performs well, it is of great importance for the tyres to be kept at the right pressure.

Inflating the tyres
The tyres are equipped with a car tyre valve. Remove the caps from the valves before inflating the tyres. If the tyres are not adequately inflated, the range of the scooter may be reduced and the tread may wear more quickly.

⚠ ***Warning***
When inflating tyres, never exceed the maximum recommended tyre pressure which is stated on the tyres (2.4 bar front and 2.2 bar rear).

Never forget to replace the valve cap after inflating the tyres. The valve cap prevents dirt and sand from getting into the valve. See the ‘Maintenance table’ regarding tyre checks.

5.4 Assembly, replacement and adjustment instructions

This chapter covers illustrated assembly, replacement and adjustment instructions.
Every separate visual instruction is prefaced with:
- Preparations
- Instructions (suggestions and advice to help you carry out tasks or procedures more easily)
- Relevant article numbers
- Tools used
- Notices (extra notes covering information you need when executing the specific task)

The tools for the specific task are illustrated in the visual instructions. The visual instructions are based on the Trophy 20, functioning for the Trophy is similar, but therefore may visual deviate from the Trophy.

5.4.1 Console

Replacing the throttle for original electronics (ID-no < QT02400)

Preparation

⚠ Switch off the scooter with the ignition key.
- Disconnect the batteries.

Instructions

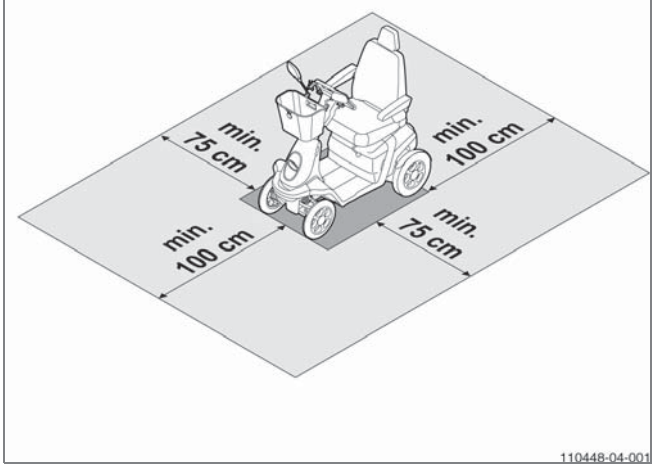
The following operations are required to replace throttle:
Unscrew the gas throttle:
Note! Suitable work area required!
- Remove the console panel (1) (4 screws) and disconnect the console panel harnesses.
- Remove the tiller PCB (3) (3 screws).
- Remove the front tiller cover (5) (4 screws) from the steering column
- Remove the ty-rap which functions as a pull relief for the wiring.
- Remove the screws (6) from the throttle levers (7). Take the throttle levers out the steering wheel.
- Guide the steering harness from the console. The tiller PCB should be lifted to do this. Never pull on a throttle lever or on a connector. This can result in serious product faults.
- Disconnecting the gas throttle connector requires precise handling. For the best result use a small flat screw driver. Push the tip of the screwdriver under the foremost (longest) lip and gently pull the connectors. The connectors will come loose and the gas throttle can be removed.

Mounting the gas throttle:
- Assemble the two included white plastic bushes (7) in combination with the two mounting screws (6).
- Attach the connector of the gas throttle to the connector of steer harness.
- Guide the cable steer harness gently in the steer towards the console. Guide the harness from the console. Make sure the gas throttle connector is positioned inside the steering wheel metalwork. The gas throttle can be assembled.
- Assemble the gas throttle (7 and 6)
  Warning! *Assembly of the screws until the black steering wheel material starts to deform. Afterwards the gas throttle must be checked on normal freedom of movement. This can be checked by moving the gas throttle to reverse and to forward direction. The gas throttle must return by itself to its middle position. The gas throttle should not stick! If the gas throttle sticks, loosen the screws a few turns, until sticking of the gas throttle disappears. If the problem still exists, please contact service department of Handicare.*
- Assemble the tiller pcb (3). (3 screws)
  Note! Place the gas throttle harnesses in the outermost corners of the console. Make sure that no harness is visible through the middle hole of the PCB. (This is the space for the speed switch on the console panel.)
- Assemble the console panel (1) (4 screws). Connect the console panel harnesses. The harness from the speed switch should be routed underneath the tiller PCB.
- Assemble the pull relief with the supplied ty-rap to the steering column.
- Assemble the tiller cover (5) (4 screws)
- Connect the batteries.
- Turn the scooter on and test the gas throttles. If in doubt, always contact the service department of Handicare

Relevant article numbers
- 9007083 Foot throttle Advanced electronics
- 1008730 4,8x19 self tapping screw

Tools used
- Allen key, 3 mm
- Metal drill, 6 mm
- Drill
- Screwdriver, crosshead

1



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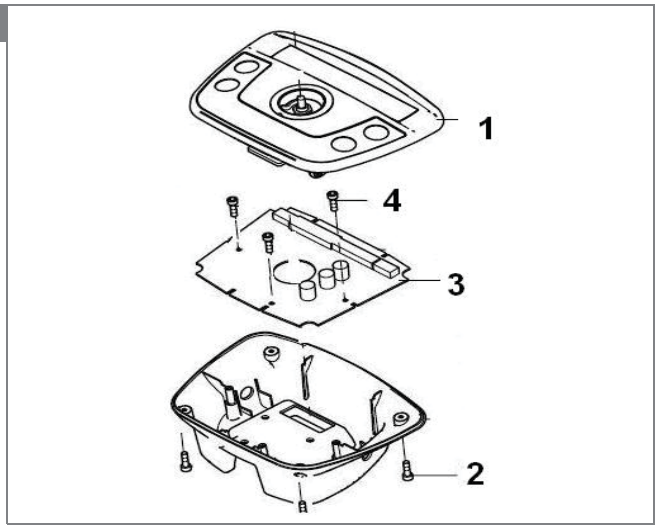

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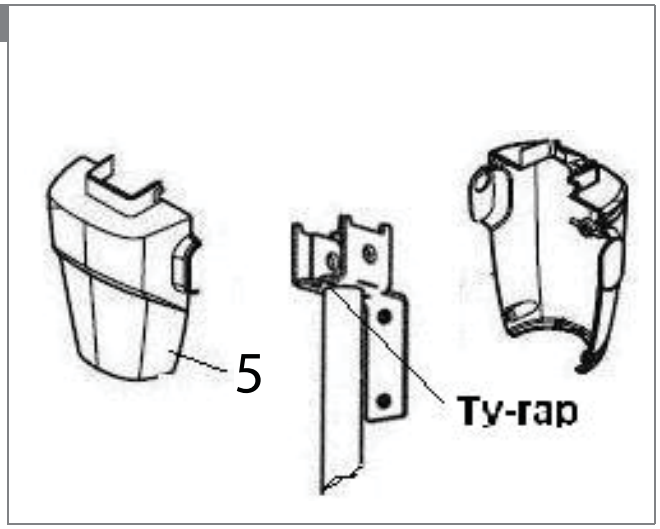

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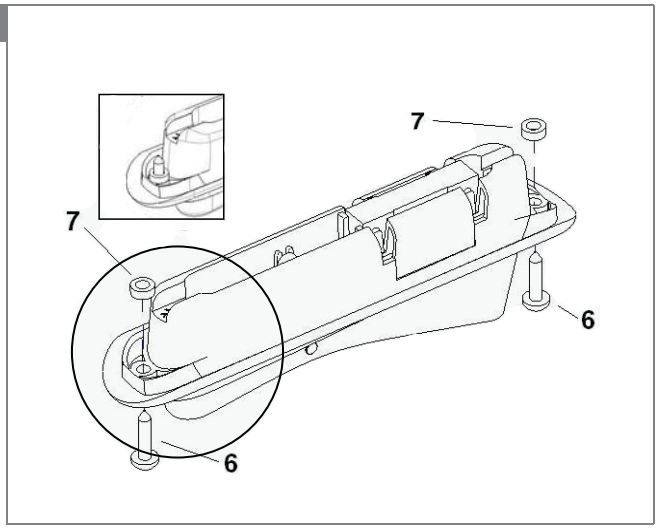

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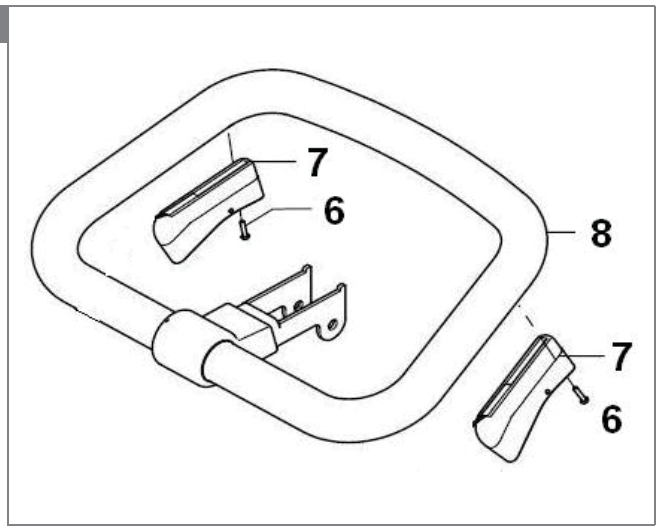


Mount the throttle controls for original electronics (ID-no < QT02400)

Safety comes first in the present design of the gas throttle circuit. This means that a build to order Trophy is specifically build to the requested configuration. There is no more ‘loose’ wiring to make rebuild afterwards easier. This means that converting the gas throttles would require pulling electrical wiring through the steering wheel.

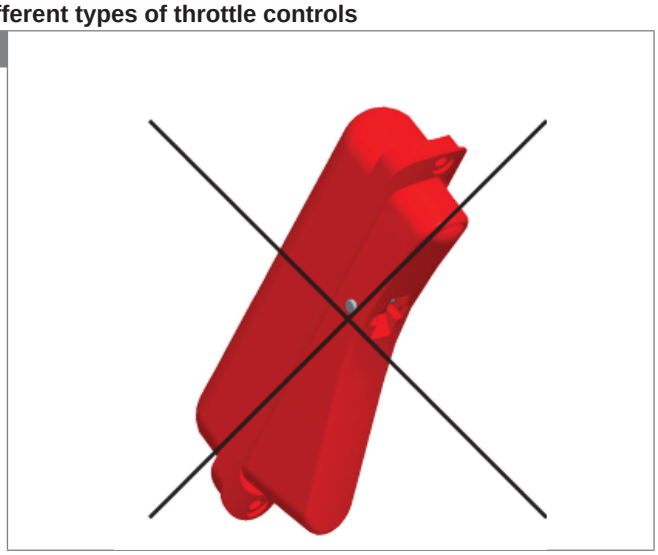
To make this conversion easier and safer for the dealer we have created an exchange pool of complete steering wheels with throttles and wiring. You can buy an exchange steering wheel, rebuild the Trophy and return the ‘old’ steering wheel. This way it costs you little time, you can realize a swift rebuild with little waiting time for the end user and do it in the safest way.

Loose cables will no longer be available as parts delivery. Our advice in converting gas throttles is to always use an exchange- or new steering wheel assembly.

Partnumber	Description	Refund
1008342	Revision steering wheel with left throttle Egis	• 60
9002671	Revision steering wheel with left throttle S-Drive	• 60
1008343	Revision steering wheel with right throttle Egis	• 60
9002672	Revision steering wheel with right throttle S-Drive	• 60
1008344	Revision steering wheel with dual throttle Egis	• 60
9002673	Revision steering wheel with dual throttle S-Drive	• 60

Different types of throttle controls

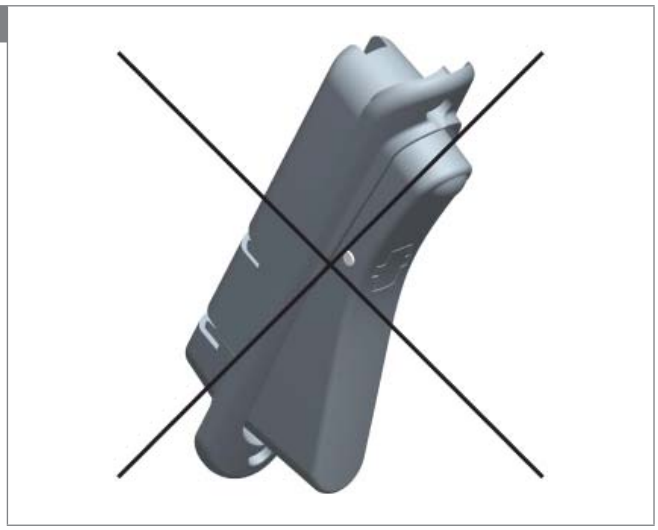
1



Red throttle control

⚠ ***Warning!*** *Never use!*

2



Grey throttle control

⚠ ***Warning!*** *Never use!*

3

Grey throttle control with black lock and warranty seal

⚠ ***Warning!*** *Use on an updated product, see label near serial number. Use on Trophy with S-Drive.*

Replacing the throttle for advanced electronics (ID-no > QT02400)

Preparation
- Switch off the scooter with the ignition key.

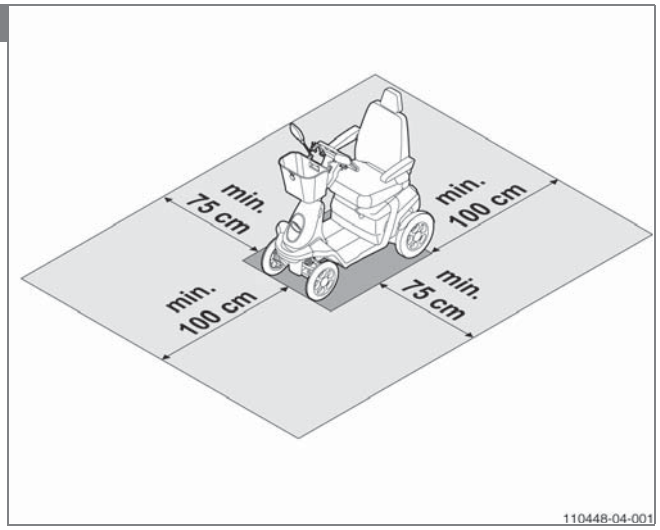
Instructions
The following operations are required to replace the throttle:
Note! Suitable work area required!
- Remove the two sheet metal screws and the throttle; disconnect in between the connector of the throttle.
- Mount the new throttle.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- 1008055 Throttle (potentiometer)

Tools used
- Screwdriver, crosshead

Notice
- N.a.

1



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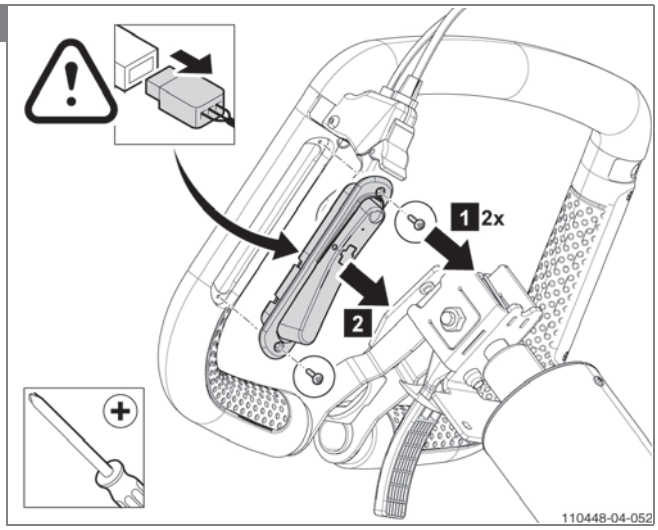


5.4.2 Front frame 3W

Replacing the front wheel and fork

Preparation
- Switch off the scooter with the ignition key.
- Use a lifting device to raise the scooter clear of the ground.

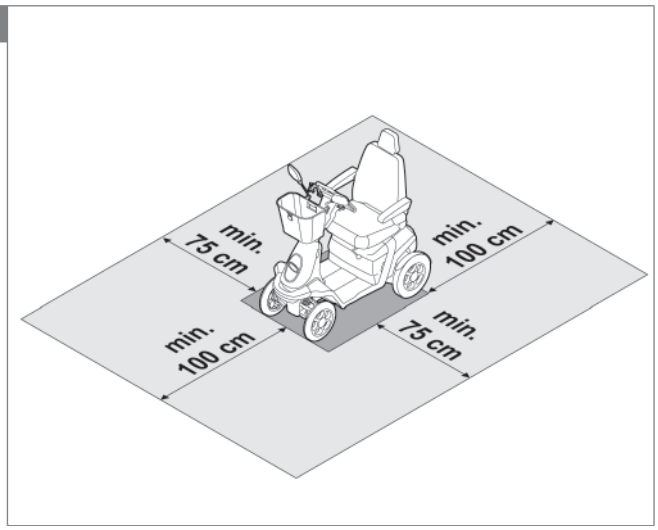
Instructions
The following operations are required to replace the front fork 3W:
- Remove the front cover and the front cover rear part.
- Remove the retaining ring and spiral pin.
- Remove the complete fork with wheel.
- Remove the hexagon nut, washer and bolt to take out the wheel.
- Replace the new front fork 3W.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- 9000504 Front fork

Tools used
- Torque wrench, socket, 13 mm
- Screw driver, crosshead
- Hammer (plastic)
- Chaser
- Circlip pliers
- Open ended spanner, 13 mm

Notice
- Some parts need to be replaced; the replacement is indicated by a symbol.
- Some operations have to be carried out by two persons; this is indicated by a symbol.

1



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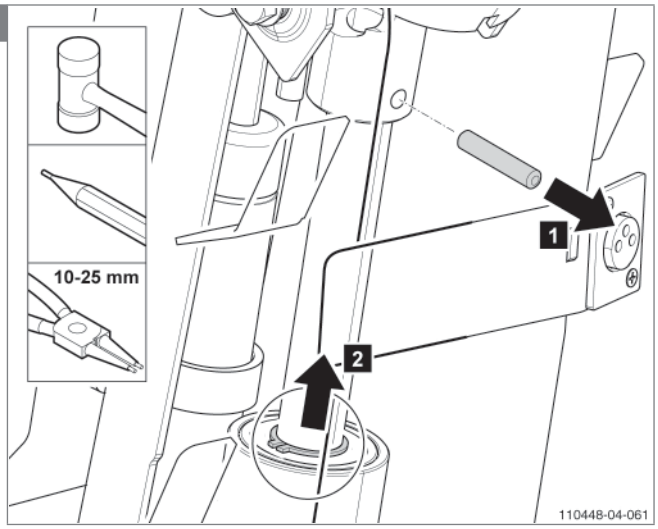

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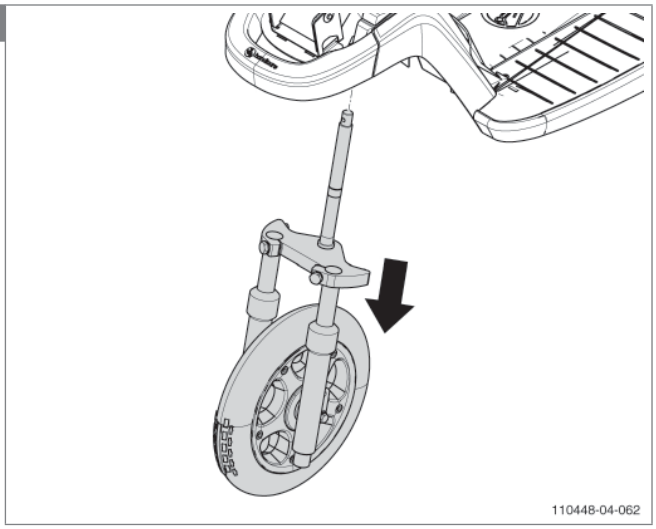

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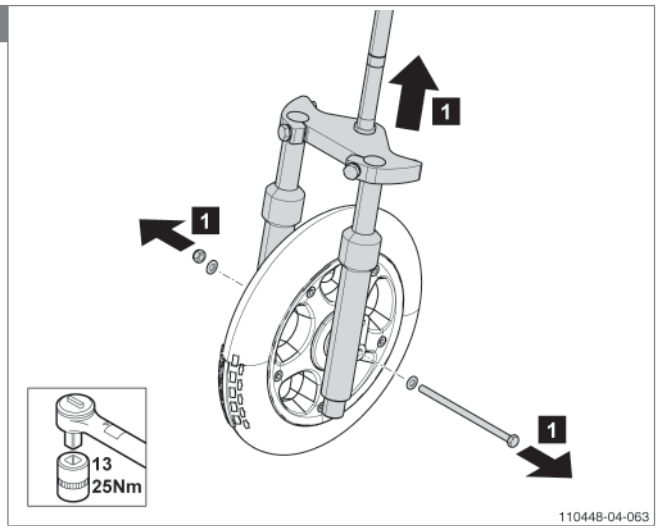


5.4.3 Front frame 4W

Replacing the front wheel

Preparation
- Switch off the scooter with the ignition key.
- Use a lifting device to raise the scooter clear of the ground.

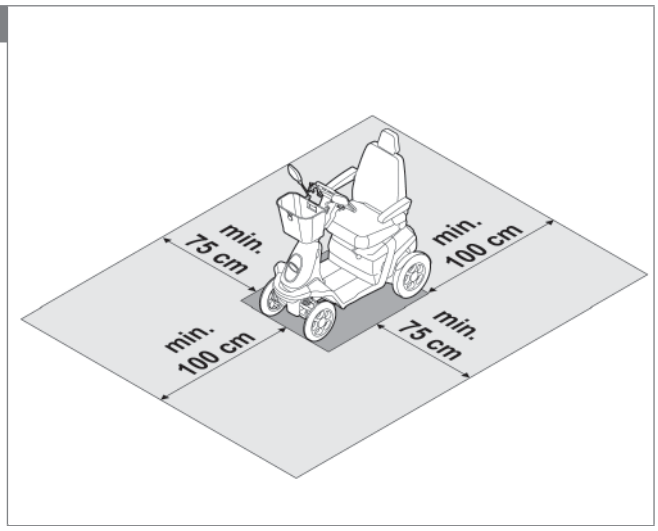
Instructions
The following operations are required to replace the front wheel:
- Remove the cover and the four hexagon screws to remove the front wheel.
- Mount the new front wheel in the reverse order.

Relevant article numbers
- 9001815 Front wheel 4W

Tools used
- Screwdriver, medium
- Torque wrench, socket bit, 6 mm

Notice
- N.a.

1



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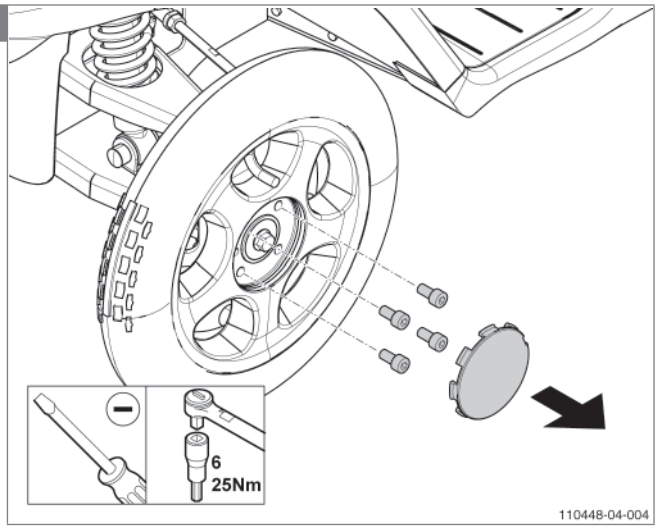
3



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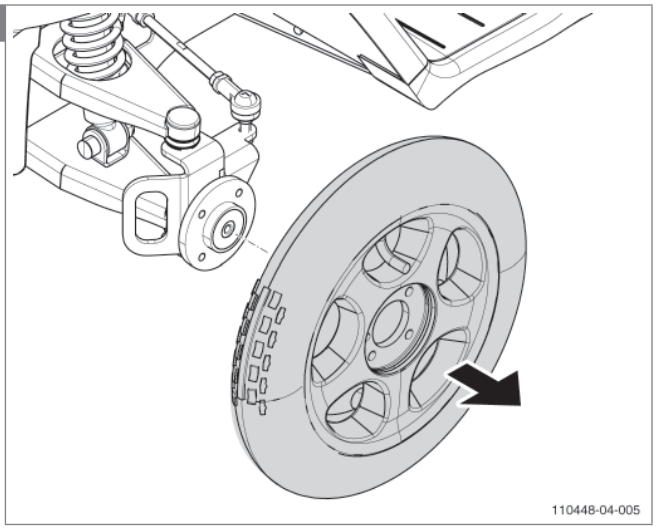


Adjustment shock absorber - front

Preparation
- Switch off the scooter with the ignition key.

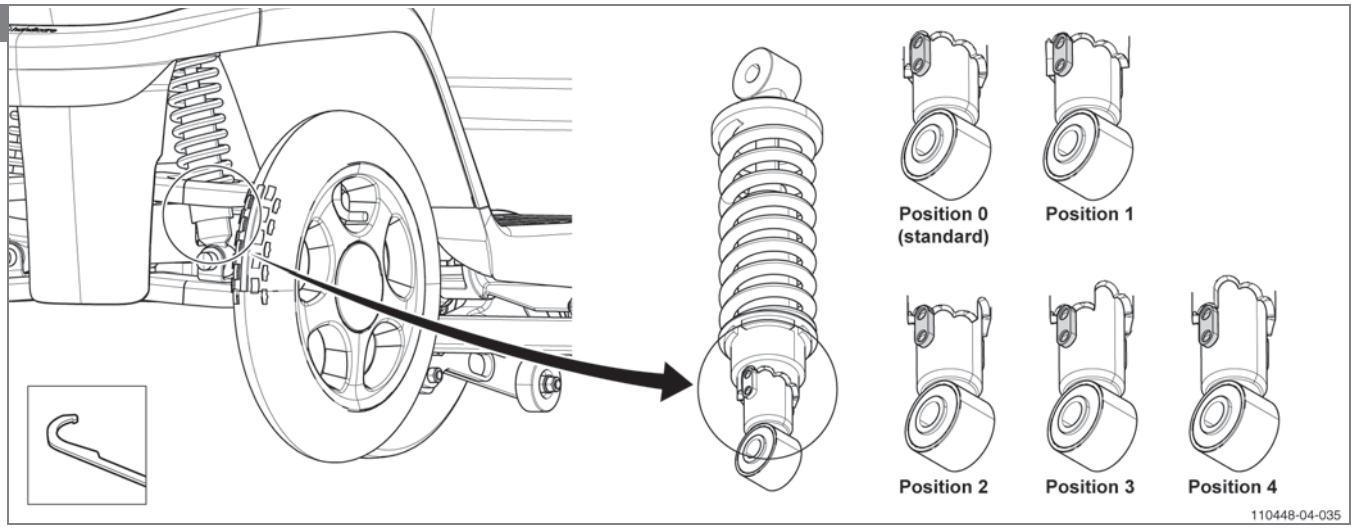
Instructions
The following operations are required to adjust the shock absorber - front:
- Read the table for more information about the adjustment of shock absorbers.
- Use the suspention adjustment key to adjust the shock absorber as desired.

Relevant article numbers
- N.a.

Tools used
- 9000825 Suspension adjustment key

Notice
- Position 0 soft and position 4 hard

1



Replacing the shock absorber - front

Preparation
- Switch off the scooter with the ignition key.
- Use a lifting device to raise the scooter clear of the ground.

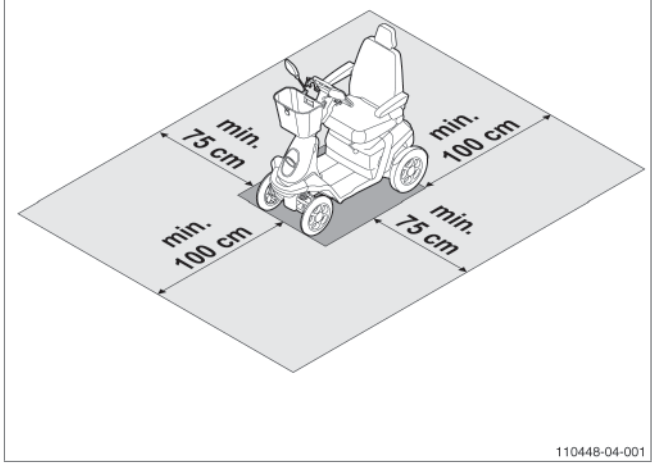
Instructions
The following operations are required to replace the shock absorber - front:
Note! Suitable work area required!
- Remove the basket, the front tiller cover, the mounting bracket for the mirrors, the front cover, the front spoiler, the front cover rear part, the front fender L/R, the front cover bottom and the front bumper.
- Remove the Allen hexagon screws and locknut form the shock absorbers on the swing arm top and lower assy.
- Remove shock absorber
- Adjust the new shock absorber according the specifications.
- Replace the new and adjusted shock absorber.
- Rebuild the scooter in the reverse order.
- **Note!** Be sure you fasten all bolts and nuts with the correct torque!

Relevant article numbers
- 9001641 Shock absorber - front

Tools used
- Torque wrench, socket,17 mm
- Socket, 7 mm
- Screwdriver, crosshead
- Allen key, 8 mm
- 9000825 Suspension adjustment key

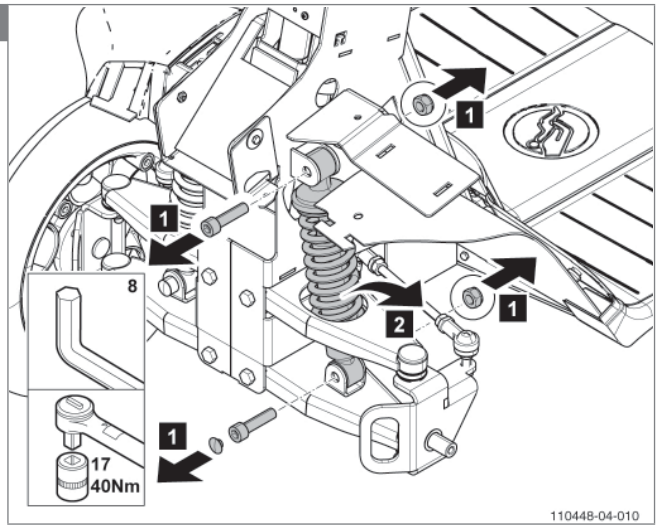
Notice
- Position 0 soft and position 4 hard

1

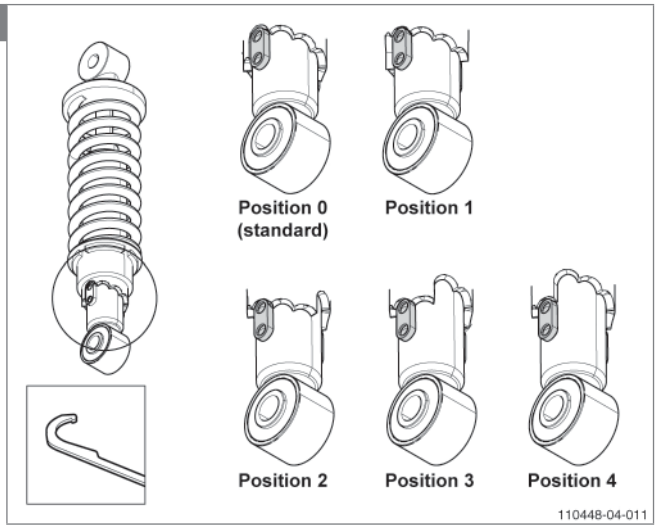


2

3


1
1
2
1
1
8
17
40Nm
110448-04-010

4


Position 0
(standard)
Position 1
Position 2
Position 3
Position 4
110448-04-011

Replacing the swing arms (top and lower assy)

Preparation
- Switch off the scooter with the ignition key.
- Use a lifting device to raise the scooter clear of the ground.

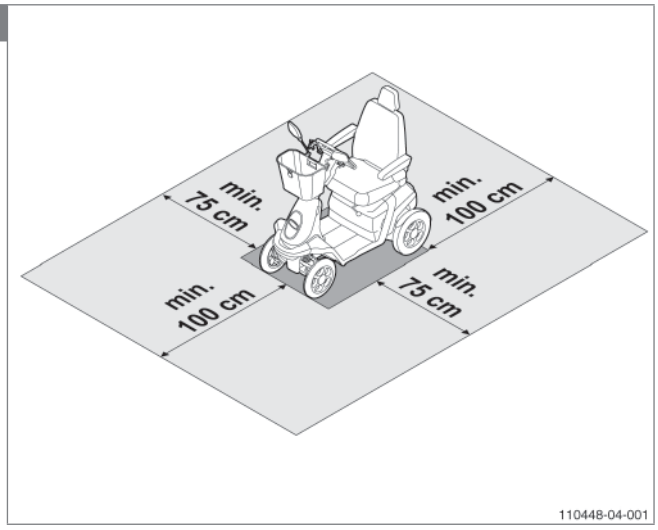
Instructions
The following operations are required to replace the swing arms:
Note! Suitable work area required!
- Remove the front spoiler.
- Remove the cover and the hexagon bolt to remove the front wheel.
- Remove the hexagon screw from the lower swing arm.
- Remove the two axle suspension parallel bolts.
- Remove the lock nut at the wheel side of the swing arm and turn the swing arm out of its position.
- Replace the new swing arm.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- 9002091 Swing arm lower assy
- 9002090 Swing arm top assy

Tools used
- Torque wrench, socket, 7 mm-13 mm / socket bit, 6 mm
- Torque wrench, socket, 17 mm
- Allen key, 8 mm
- Screwdriver
- Open ended spanner, 10 mm

Notice
- N.a.

1



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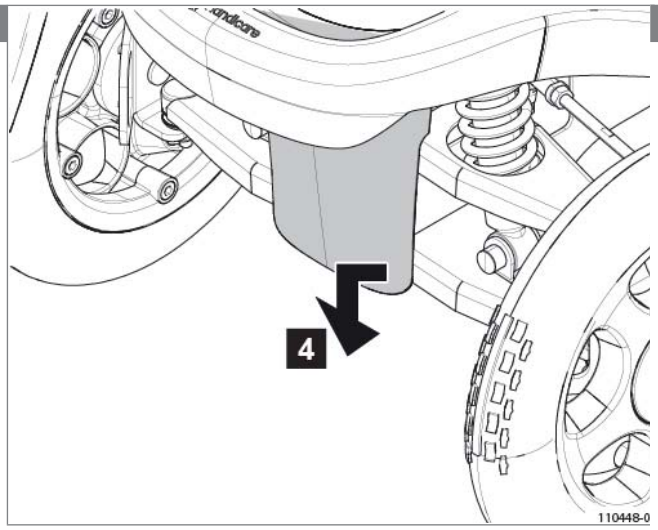
3



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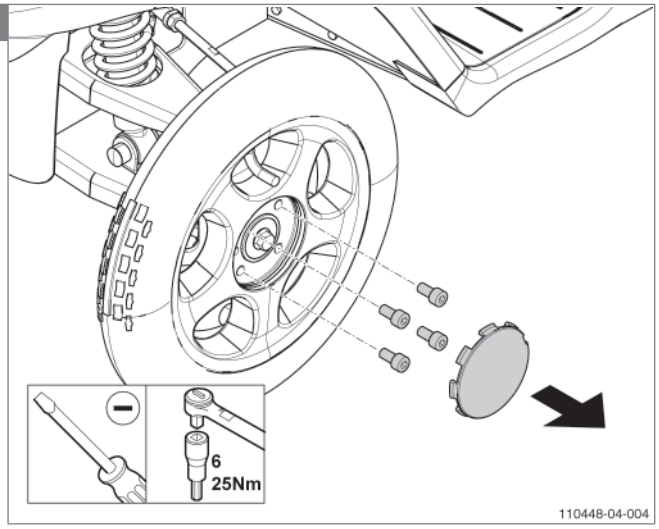

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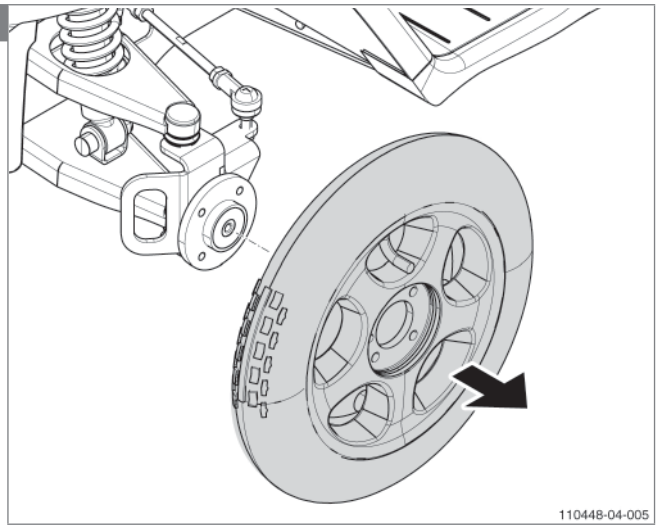
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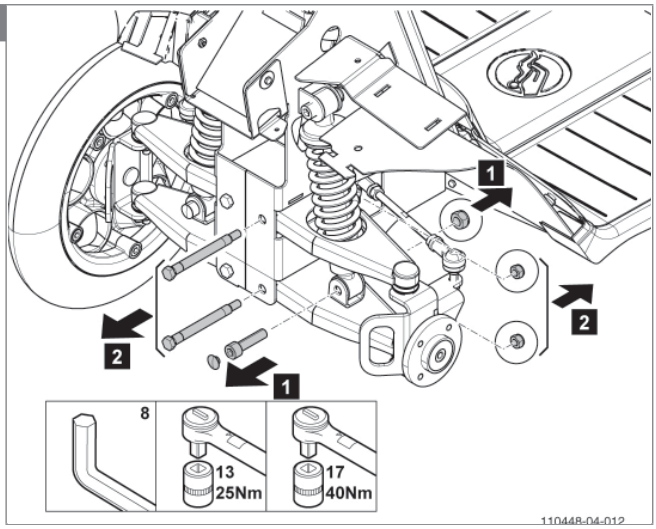
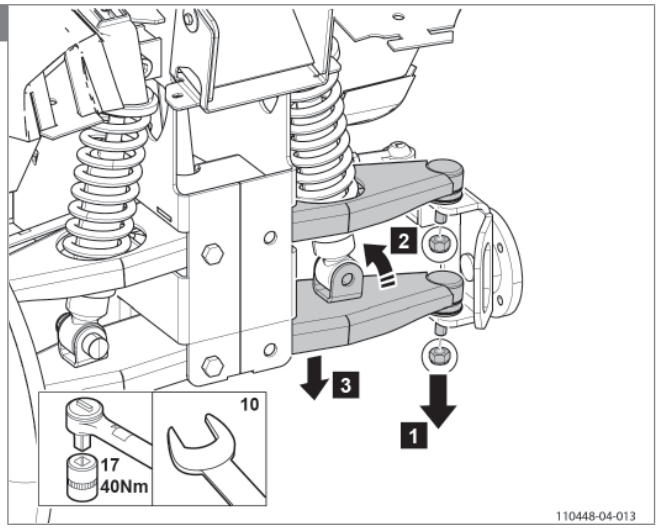

1
2
2
1
8
13
25Nm
17
40Nm
110448-04-012

7


2
3
1
10
17
40Nm
110448-04-013

5.4.4 Rear frame

Replacing the rear wheel

Preparation
- Switch off the scooter with the ignition key.
- Use a lifting device to raise the scooter clear of the ground.

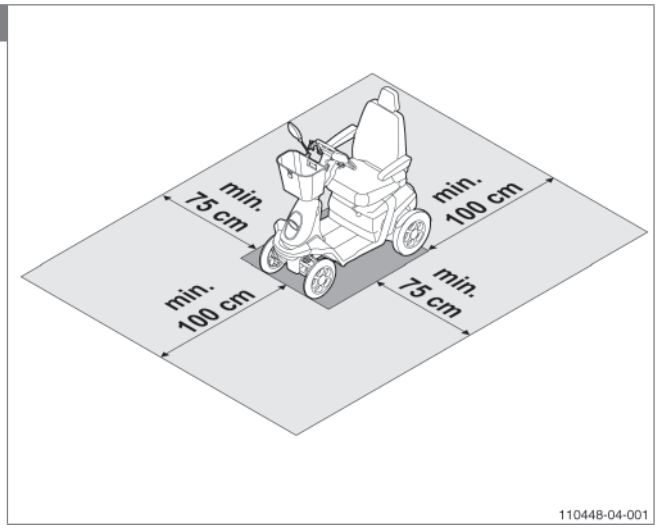
Instructions
The following operations are required to replace the rear wheel:
Note! Suitable work area required!
- Remove the cover and four hexagon head cap screws to remove the rear wheel.
- Mount the new rear wheel in the reverse order.

Relevant article numbers
- 9000550 Rear wheel white, left-side with brake drum
- 9001996 Rear wheel grey, left-side with brake drum
- 1015104 Rear wheel grey, left-side with brake drum and block profile
- 9001172 Rear wheel white, left side standard
- 9001998 Rear wheel grey, left side standard
- 1015154 Rear wheel grey, left side standard with block profile
- 9000549 Rear wheel white, right-side with brake drum
- 9001995 Rear wheel grey, right-side with brake drum
- 1015103 Rear wheel grey, right-side with brake drum and block profile
- 9001173 Rear wheel white, right side standard
- 9001997 Rear wheel grey, right side standard
- 1015153 Rear wheel grey, right side standard with block profile

Tools used
- Screwdriver
- Torque wrench, socket bit, 6 mm

Notice
- N.a.

1



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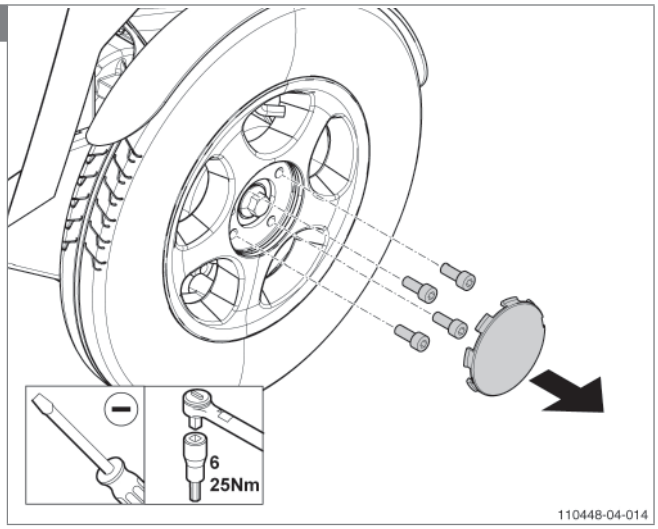
3



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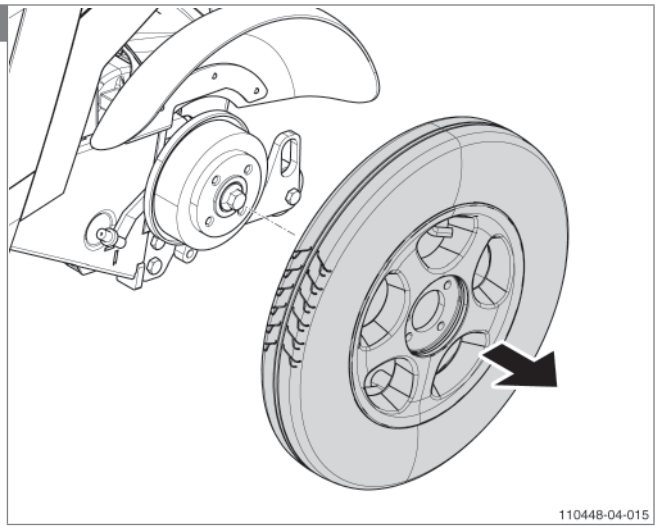


Replacing the mechanical brake

Preparation
- Switch off the scooter with the ignition key.
- Use a lifting device to raise the scooter clear of the ground.

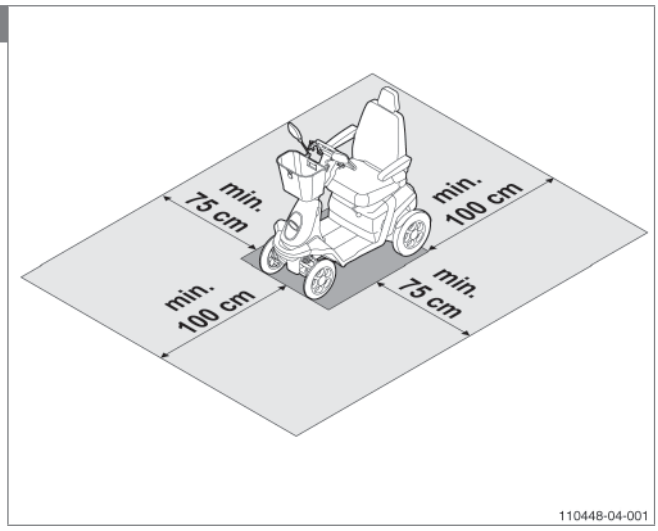
Instructions
The following operations are required to replace the mechanical brake:
Note! Suitable work area required!
- Remove the cap and hexagon flange bolt to remove the rear wheel.
- Remove the brake cable.
- Remove the two hexagon head cap screw and remove the brake.
- Mount the new brake.
- Rebuild the scooter in the reverse order.
- Use Loctite 243 before fastening the hexagon flange bolt with 90 Nm.

Relevant article numbers
- 1002576 Brake right
- 1002577 Brake left

Tools used
- Screwdriver
- Torque wrench, socket, 16 mm
- Allen key, 5 mm
- Loctite 243

Notice
- N.a.

1



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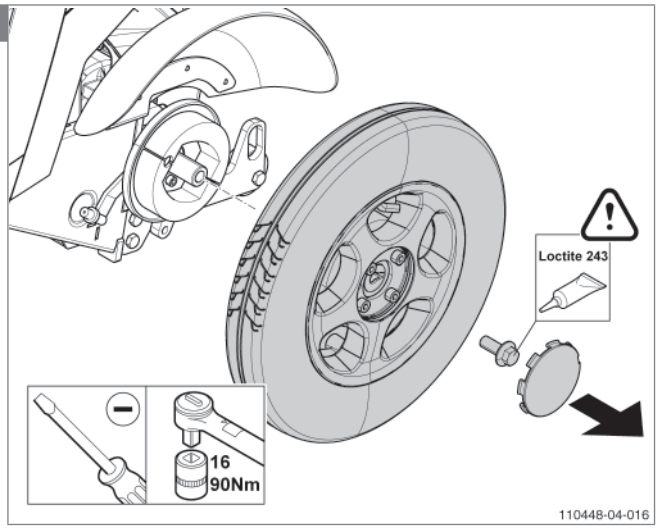

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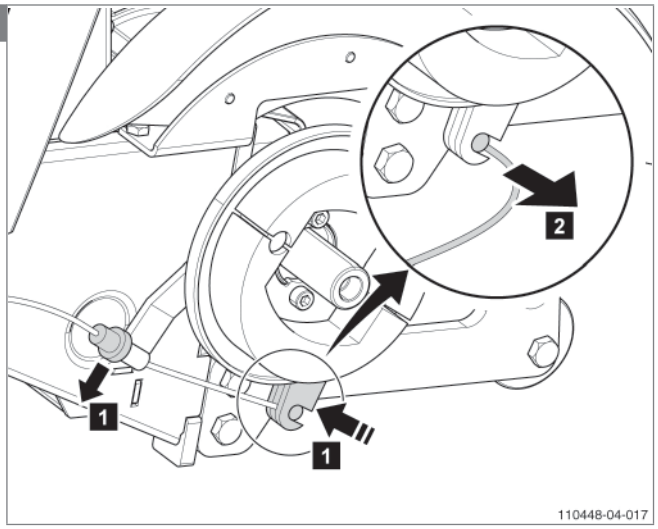
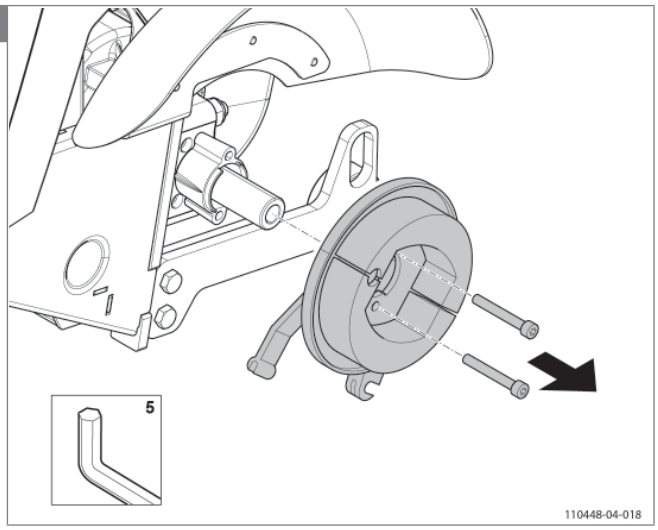


Note! *Use Loctite 243 at the indicated locations during assembling the scooter.*

5



Replacing the carbon brushes

Preparation
- Switch off the scooter with the ignition key.
- Disconnect the batteries.
- Use a lifting device to raise the scooter clear of the ground.

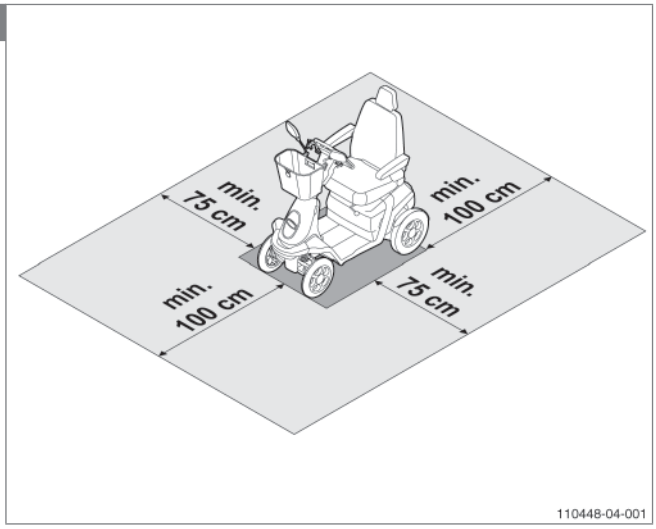
Instructions
The following operations are required to replace the carbon brushes:
Note! Suitable work area required!
- Remove the rear cover.
- Disconnect all motor connectors from the S-drive controller.
- Lock the freewheel lever.
- Remove four hexagon bolts and remove the motor cover.
- Unscrew the carbon brush cover.
- Pull the carbon brush out of the housing and remove the brush.
- Inspect the collector on the anchor of the motor; if the collector is seriously worn, replace the entire drive unit.
- Clean the collector on the anchor of the motor from dust with pressed air.
- Place the carbon brush in the holder; this can be done in one way only.
- Screw the new plastic screw cap onto the carbon brush holder.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- 1002646 Carbon brush for Trophy with Egis
- 10.300.031.000 Carbon brush for Trophy with S-Drive
- 1011585 Carbon brush set for CT transaxle

Tools used
- Lifting device
- Screwdriver short
- Allen key, 4 mm
- Socket, 7 mm, 10 mm and 16 mm

Notice
- Some parts need to be replaced; the replacement is indicated by a symbol.
- Make sure the scooter is switched off.

1



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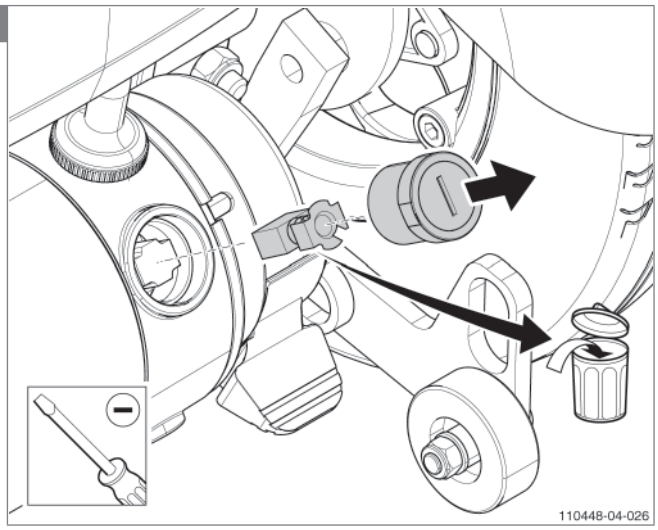


Replacing the motor brake

Preparation
- Switch off the scooter with the ignition key.
- Disconnect the batteries.
- Use a Lifting device to raise the scooter clear of the ground.

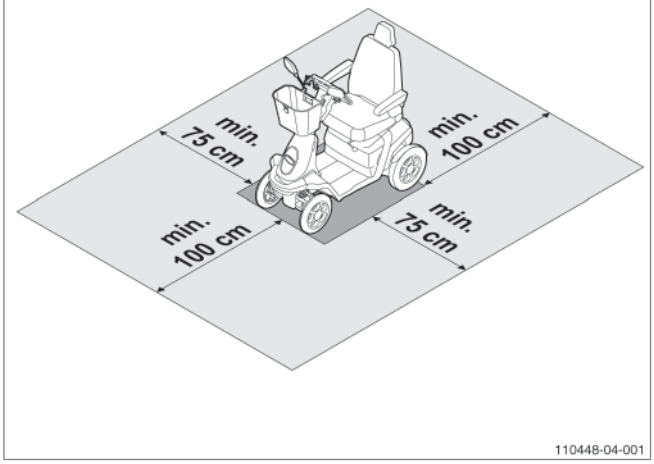
Instructions
The following operations are required to replace the free wheel lever:
Note! Suitable work area required!
- Remove the rear cover.
- Disconnect all motor connectors from the S-drive controller and the speed sensor cable.
- Lock the freewheel lever.
- Remove the four hexagon bolts and remove the motor cover.
- Remove the hexagon screws and remove the free wheel lever.
- Mount the new free wheel lever.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- 1003225 Motor brake Egis
- 9003243 Motor brake S-drive
- 1012104 Motor brake for CT transaxle

Tools used
- Screwdriver
- Socket, 7 mm
- Allen key, 4 mm

Notice
- Some parts need to be replaced; the replacement is indicated by a symbol.
- Make sure the scooter is switched off.

1



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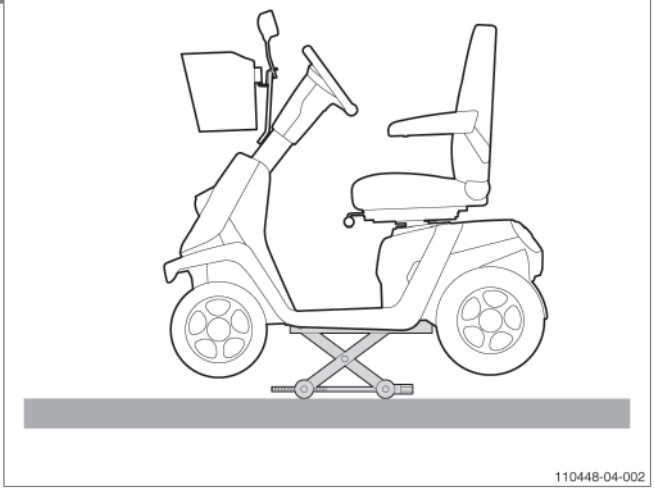

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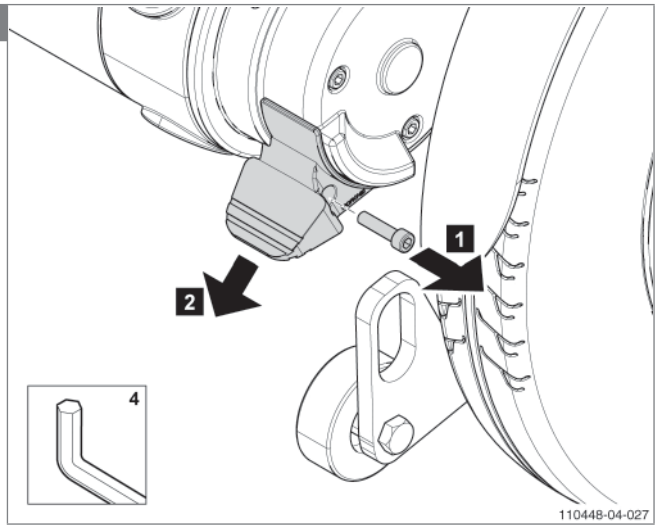

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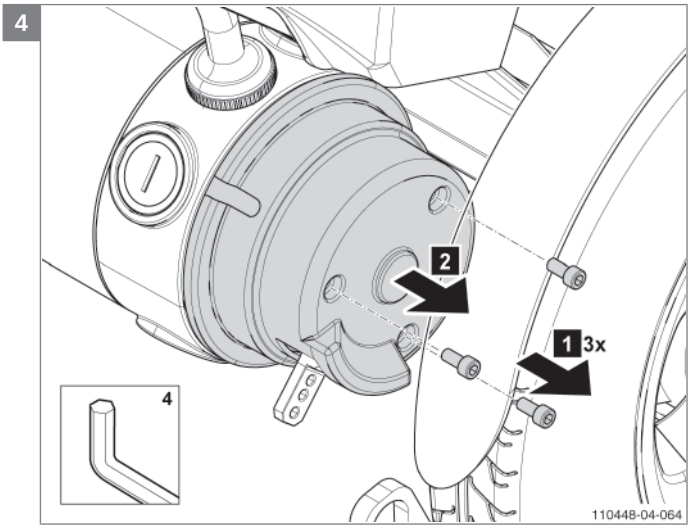

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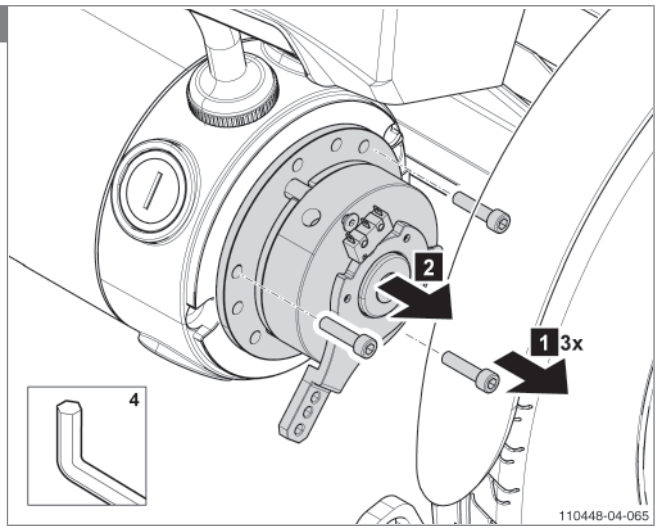


Replacing the transaxle

Preparation
- Switch off the scooter with the ignition key.
- Disconnect the batteries.
- Use a lifting device to raise the scooter clear of the ground.

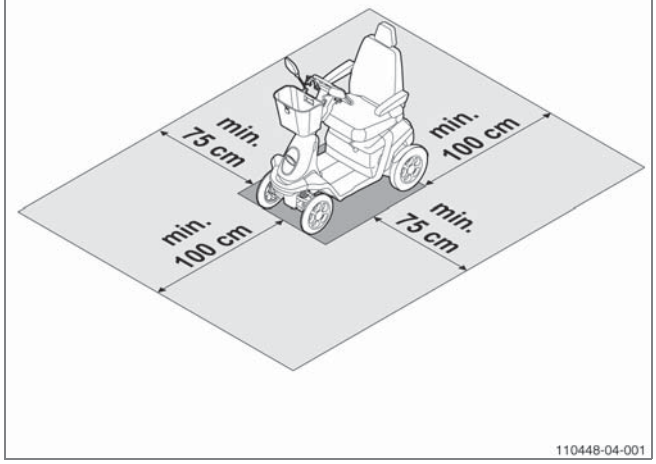
Instructions
The following operations are required to replace the transaxle:
Note! Suitable work area required!
- Remove the rear cover.
- Disconnect all motor connectors from the S-drive controller and the speed sensor cable..
- Lock the freewheel lever.
- Remove the cover and hexagon flange bolt to remove the rear wheel.
- Remove the brake cable
- Remove the two hexagon head cap screws to remove the brake mounting, key and brake.
- Remove the four lock nuts and remove the transaxle and rubber mounting strips.
- Mount the new the transaxle.
- Rebuild the scooter in the reverse order.
- Use Loctite 243 before fastening the hexagon flange bolt with 90 Nm.

Relevant article numbers
- 1007947 Transaxle Schmid Trophy 3 and 4 wheel, Egis
- 1007961 Transaxle Trophy Alpine, Egis (max 11 km/h)
- 1008565 Transaxle Trophy Alpine, S-Drive (max 11 km/h)
- 1013184 Transaxle CT Trophy 3 and 4- wheel, S-Drive

Tools used
- Socket, 7 mm
- Socket, 17 mm
- Torque wrench, socket, 16 mm
- Screwdriver
- Allen key, 4 mm
- Loctite 243

Notice
- Some parts need to be replaced; the replacement is indicated by a symbol.
- Make sure the scooter is switched off.

1



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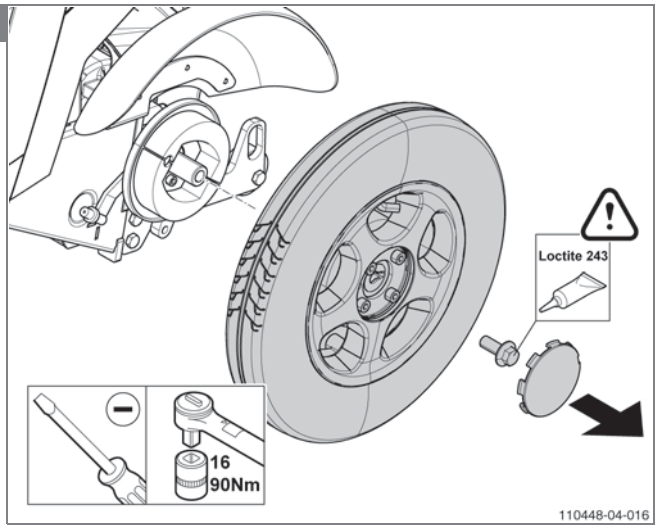

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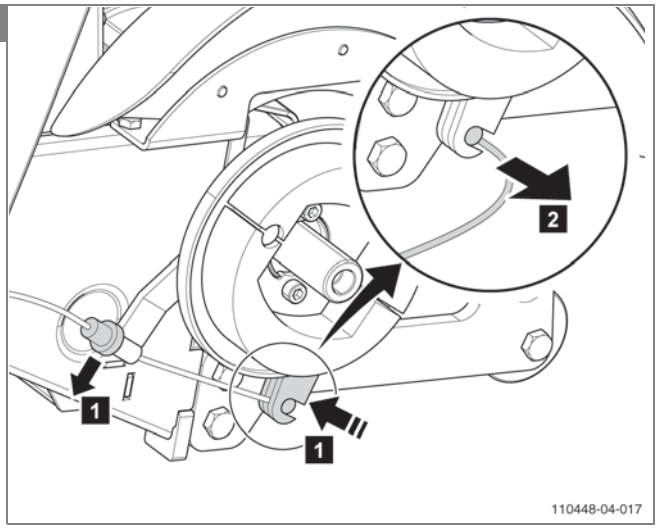
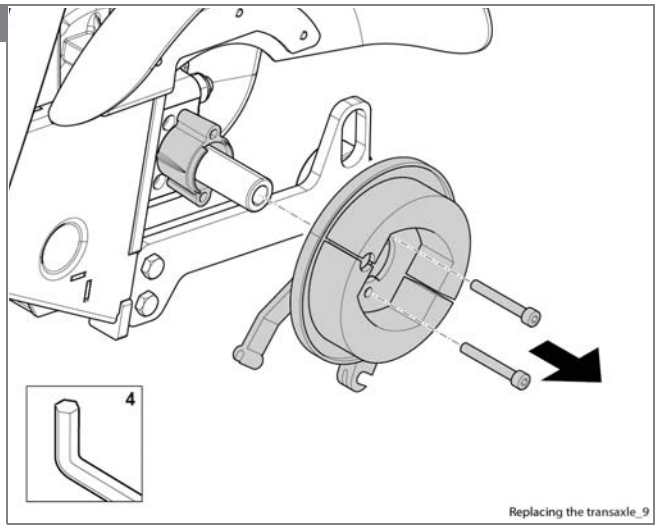


Note! *Use Loctite 243 at the indicated locations during assembling the scooter.*

5



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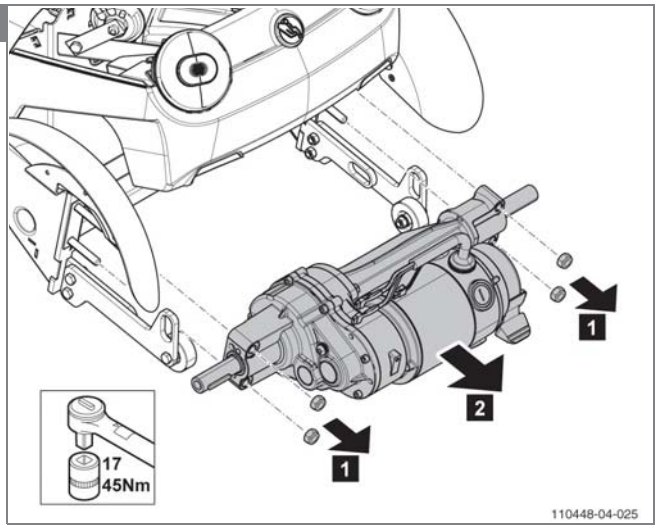


Adjustment the shock absorber - rear

Preparation
- Switch off the scooter with the ignition key.

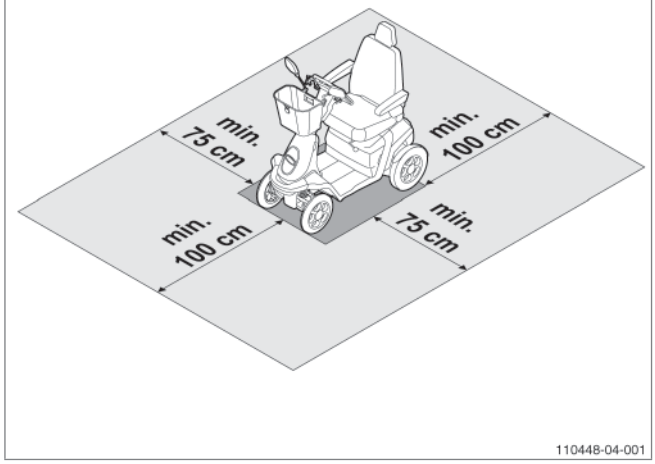
Instructions
The following operations are required to adjust the shock absorber - rear:
Note! Suitable work area required!
- Remove the seat.
- Remove the battery cover.
- Loosen the battery strap.
- Disconnect all connectors from the battery.
- Remove the battery.
- Read the table for more information about the adjustment of shock absorbers.
- Use the special adjustment tool to adjust the shock absorber as desired.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- N.a.

Tools used
- 9000825 Suspension adjustment key

Notice
- Make sure the scooter is switched off.

1



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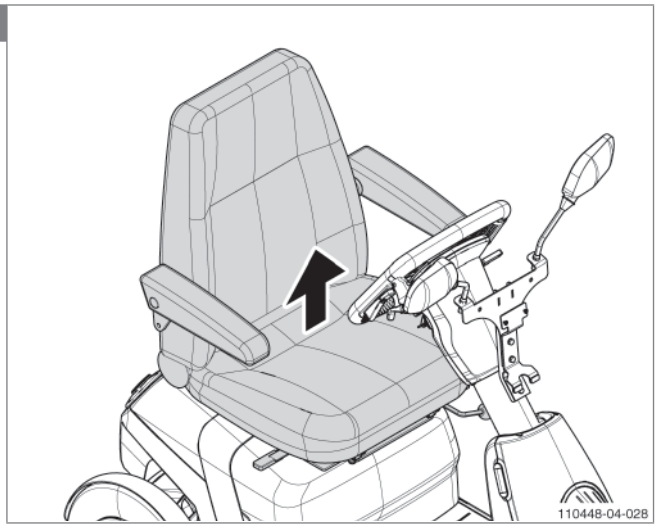

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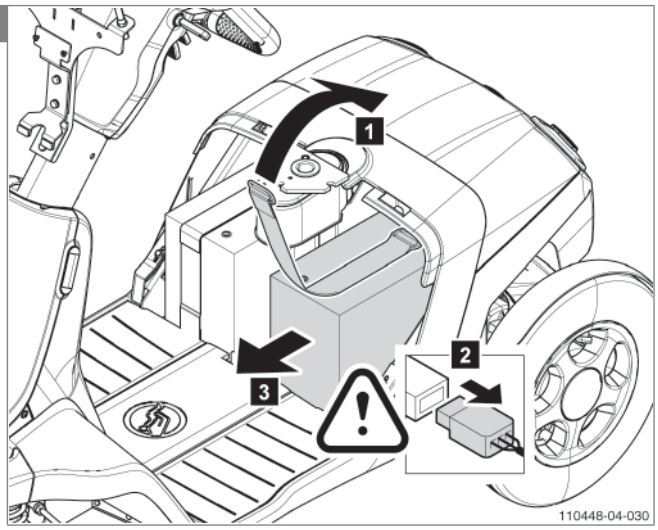
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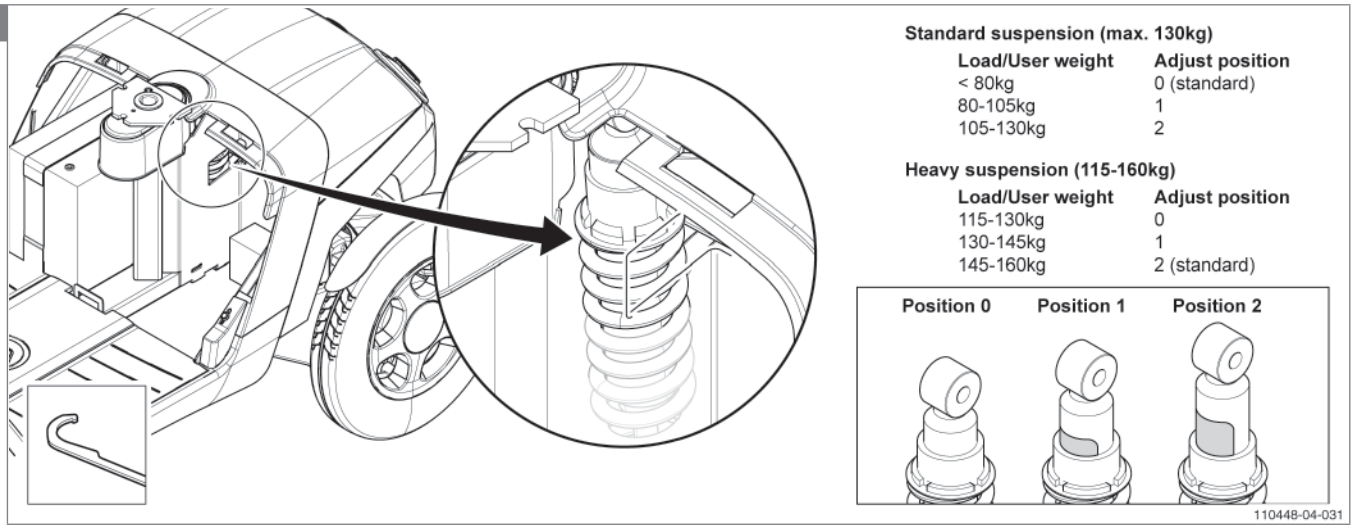
110448-04-030

4


Standard suspension (max. 130kg)
Load/User weight Adjust position
< 80kg 0 (standard)
80-105kg 1
105-130kg 2
Heavy suspension (115-160kg)
Load/User weight Adjust position
115-130kg 0
130-145kg 1
145-160kg 2 (standard)
Position 0
Position 1
Position 2
110448-04-031

Replacing the shock absorber - rear

Preparation
- Switch off the scooter with the ignition key.

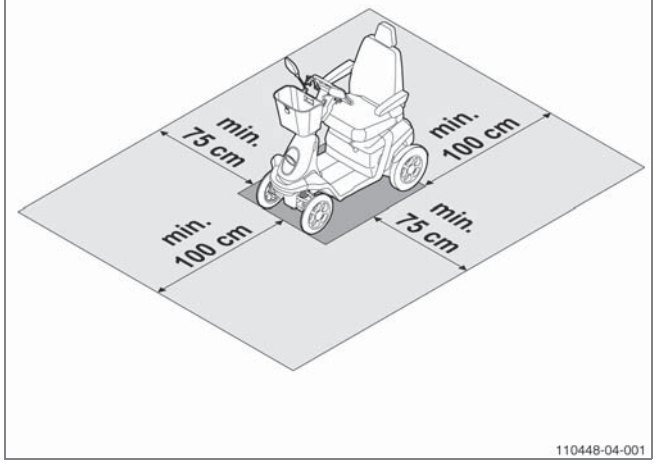
Instructions
The following operations are required to replace the shock absorber - rear:
Note! Suitable work area required!
- Remove the seat.
- Lift the scooter to raise the wheels clear from the ground.
- Remove the rear cover.
- Remove the battery cover.
- Remove the bolts of the rollbar 6x
- Remove the roll-bar
- Remove the hexagon head cap screw
- Take out the shock absorber.
- Read the table for more information about the adjustment of shock absorbers.
- Use the special adjustment tool to adjust the shock absorber as desired.
- Mount the new, correct adjusted, shock absorber.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- 9000603 Shock absorber standard
- 9000683 Shock absorber heavy duty

Tools used
- Socket, 7 mm / 17 mm
- Allen key, 8 mm
- 9000825 Suspension adjustment key

Notice
- Make sure the scooter is switched off.

1



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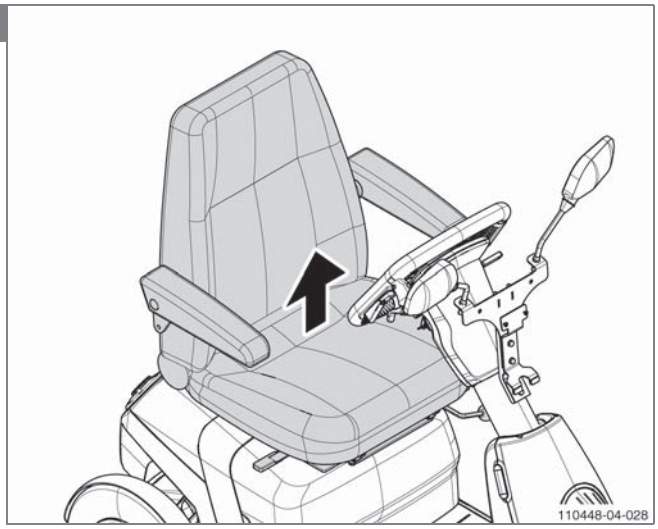

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110448-04-002

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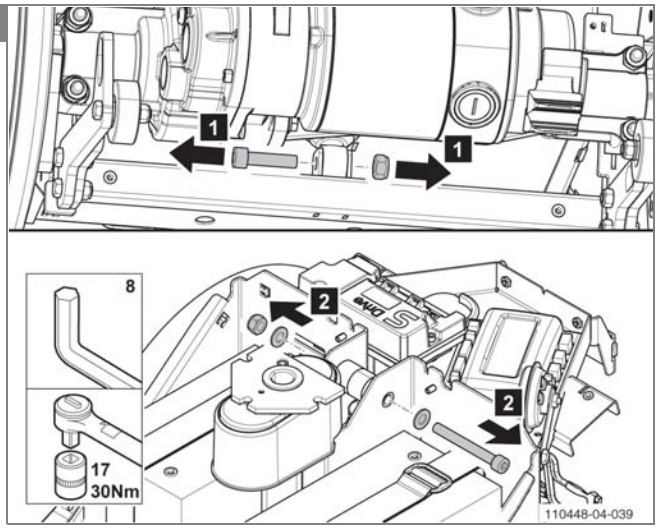
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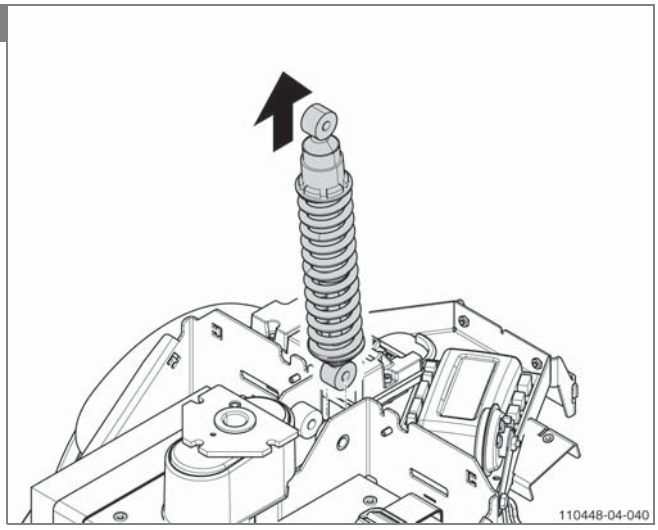
17
30Nm
110448-04-039

5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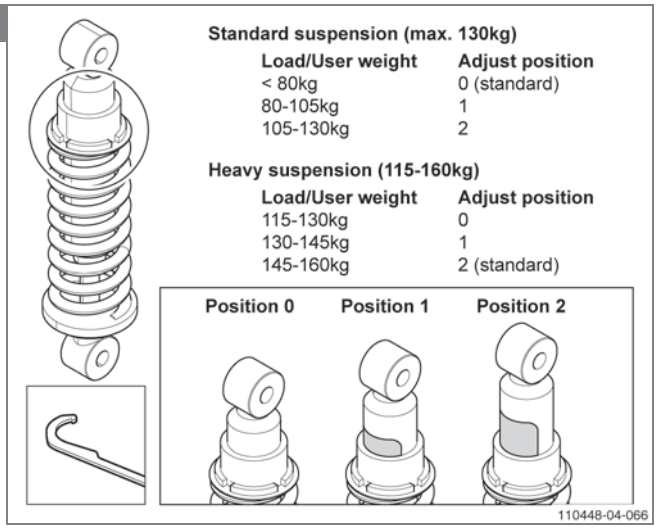

Standard suspension (max. 130kg)
Load/User weight
Adjust position
< 80kg
0 (standard)
80-105kg
1
105-130kg
2
Heavy suspension (115-160kg)
Load/User weight
Adjust position
115-130kg
0
130-145kg
1
145-160kg
2 (standard)
Position 0
Position 1
Position 2
110448-04-066

Replacing the tiller PCB

Preparation
- Switch off the scooter with the ignition key.
- Disconnect the batteries.

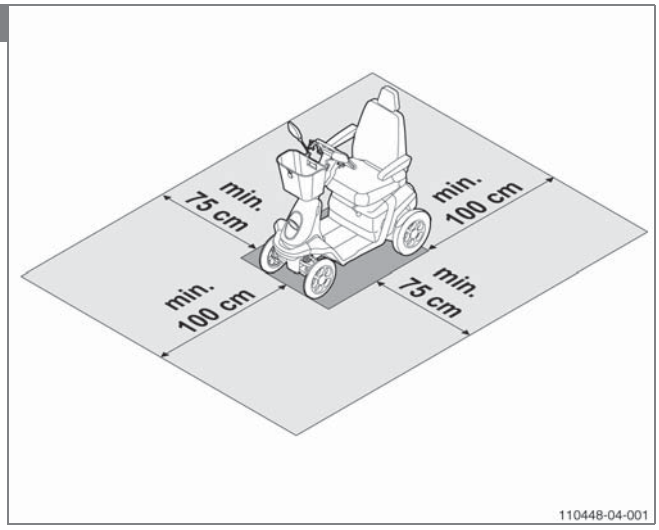
Instructions
The following operations are required to replace the tiller PCB:
Note! Suitable work area required!
- Remove the basket and the mounting bracket for the mirrors.
- Remove the two bolts and remove the front tiller cover.
- Remove the tyrap
- Remove the nut, the four Ejot screws and the dashboard.
- Disconnect all connectors from the tiller PCB.
- Remove the three Ejot screws to remove the tiller PCB.
- Mount the new tiller PCB.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- 9000496 PCB console for original electronics (ID-no < QT02400)
- 9008789 Tiller PCB Basic for advanced electronics (ID-no > QT02400)
- 9008791 Tiller PCB Dual control for advanced electronics (ID-no > QT02400)
- 9008790 Tiller PCB Full option for advanced electronics (ID-no > QT02400)

Tools used
- Socket, 10 mm
- Screwdriver, crosshead

Notice
- Make sure the scooter is switched off.

1



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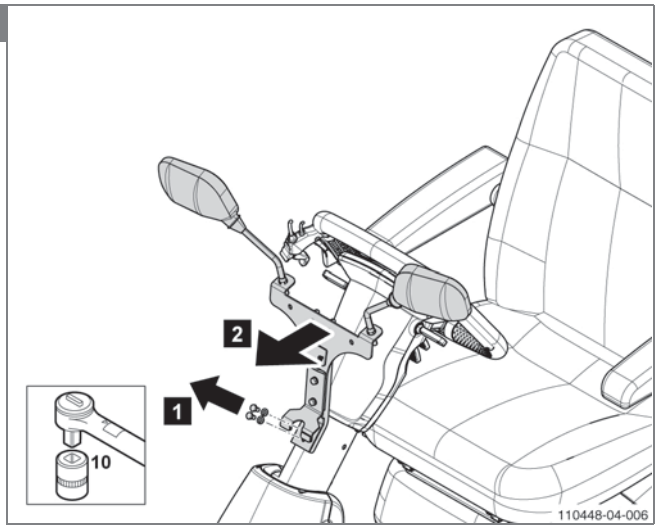

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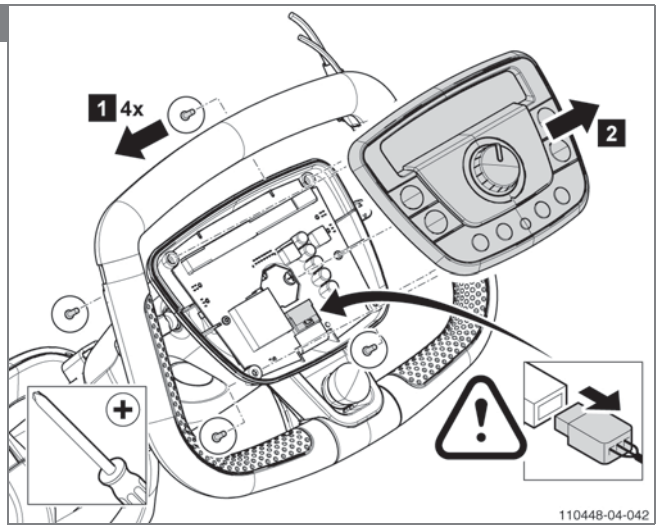

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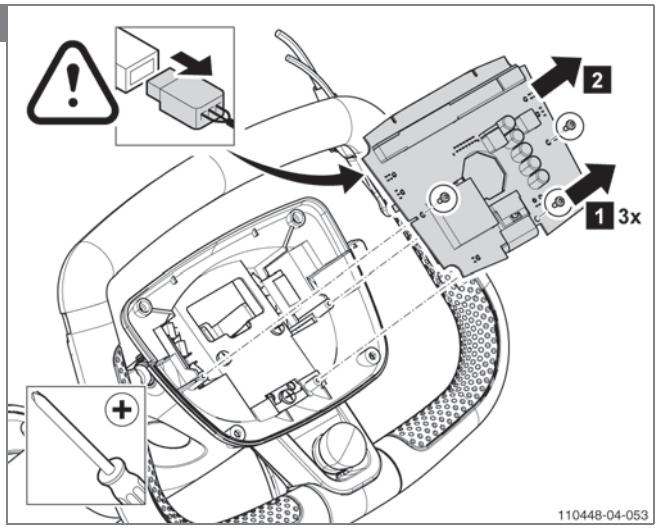


Replacing the stop switch

Preparation
- Switch off the scooter with the ignition key.
- Disconnect the batteries.

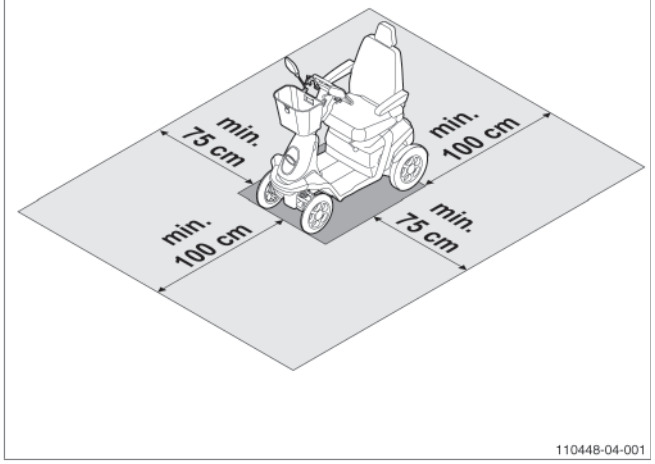
Instructions
The following operations are required to replace the stop switch:
Note! Suitable work area required!
- Remove the basket and the mounting bracket for the mirrors.
- Remove the two bolts and remove the front tiller cover.
- Remove the nut, the four Ejot screws and the dashboard.
- Remove the tyrap
- Disconnect all connectors from the tiller PCB.
- Remove the three Ejot screws to remove the tiller PCB.
- Disconnect the connectors of the console bottom.
- Remove the recessed button head and Ejot screws, disconnect the connectors the stop switch and remove the top and bottom steering wheel covers.
- Mount the new stop switch.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- 9006138 Emergency stop

Tools used
- Socket, 10 mm
- Screwdriver, crosshead

Notice
- Make sure the scooter is switched off.

1



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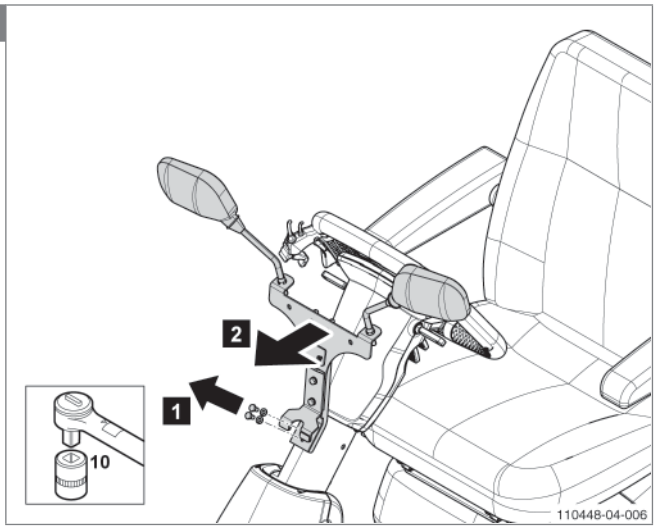

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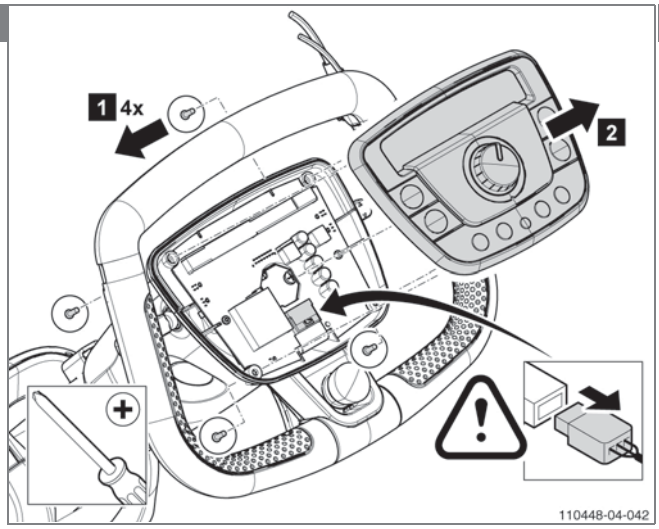
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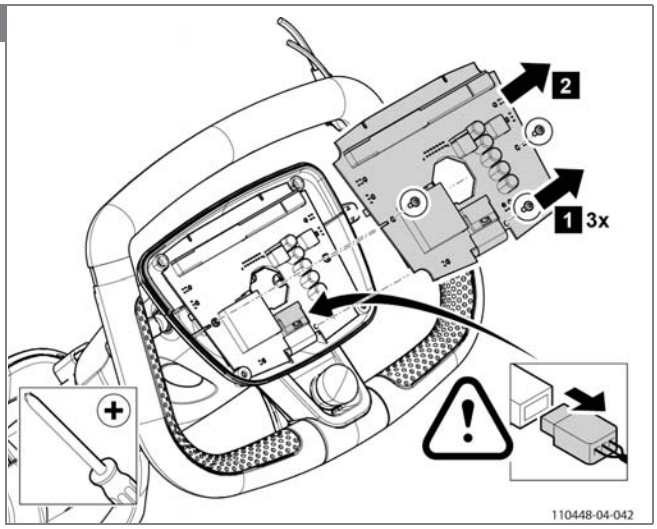
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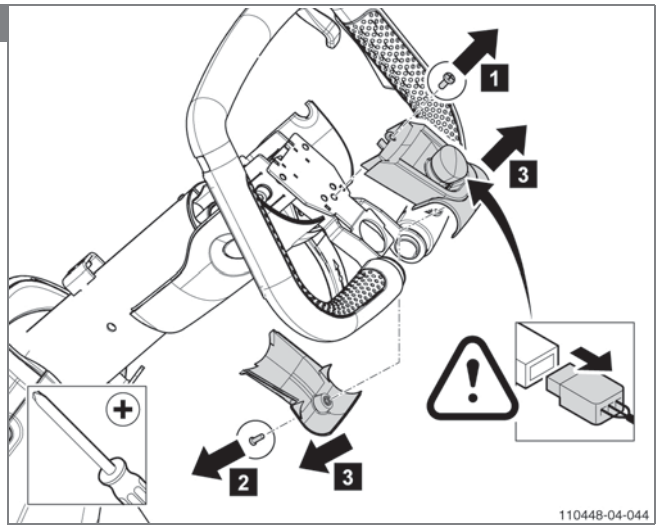
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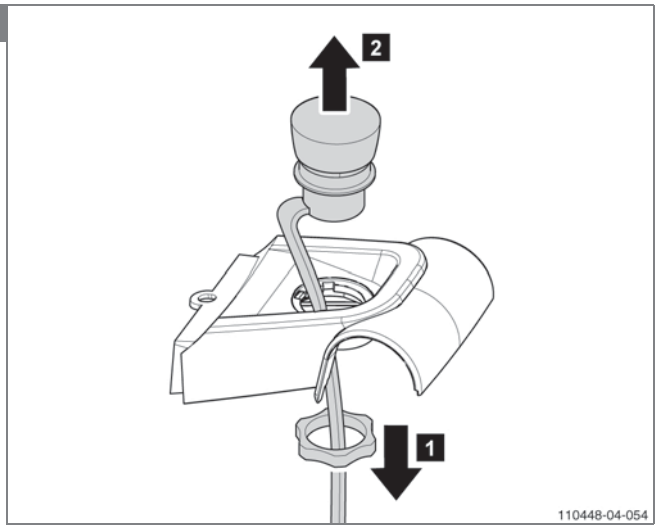

2
1
110448-04-054

5.4.5 Electronics

Replacing the controller

Preparation
- Switch off the scooter with the ignition key.
- Disconnect the batteries.

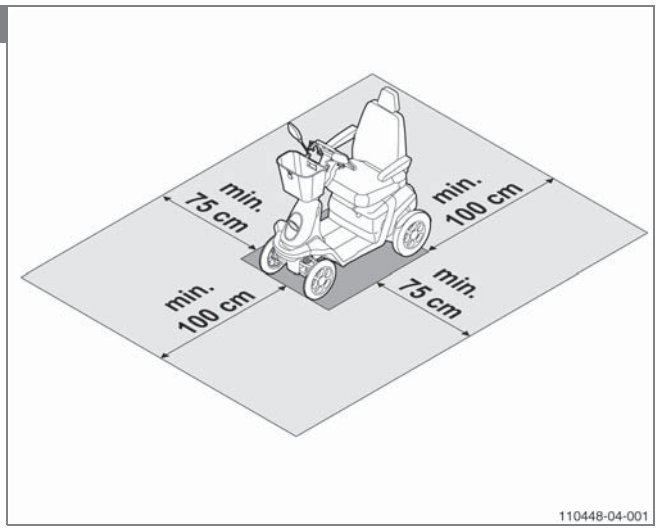
Instructions
The following operations are required to replace the controller:
Note! Suitable work area required!
- Remove the rear cover.
- Remove the S-drive cover.
- Disconnect all connectors from the S-drive controller.
- Remove the two hexagon head cap screws and remove the controller.
- Mount the new controller.
- Rebuild the scooter in the reverse order.

Relevant article numbers
- 1008074 Controller Egis 110A
- 9002457 Controller S-Drive 120A (ID-no > LT03210)
- 1012504 Controller S-Drive 140A

Tools used
- Allen key, 5 mm

Notice
- In case of S-drive controller 90A watch out for motor harness and power harness.

1



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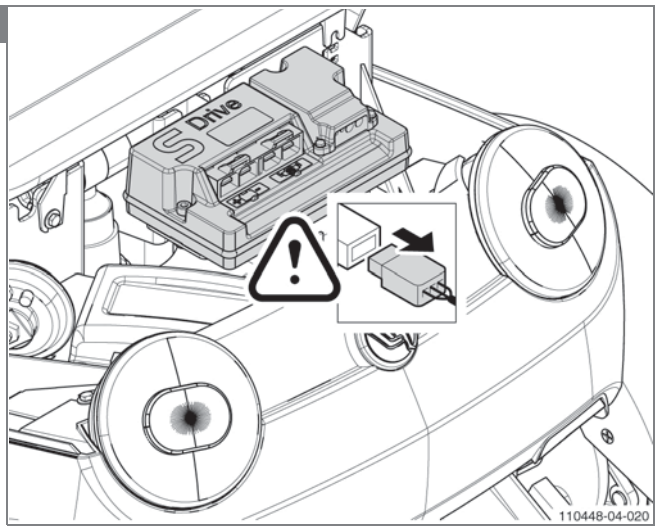

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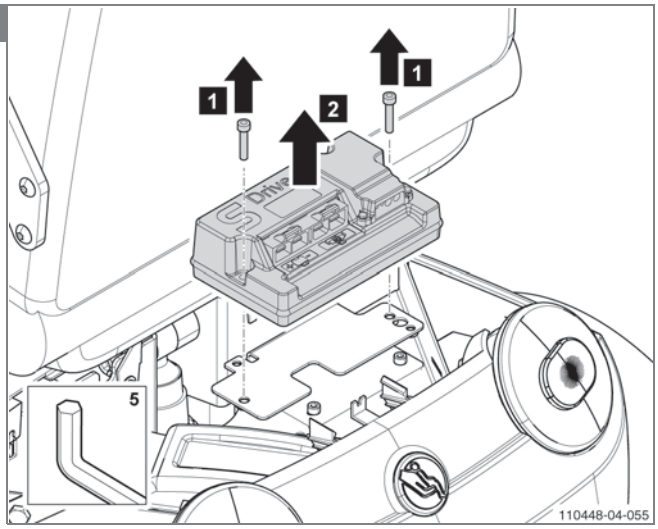


5.4.6 Accessories

Mount the crutch holder, horizontal

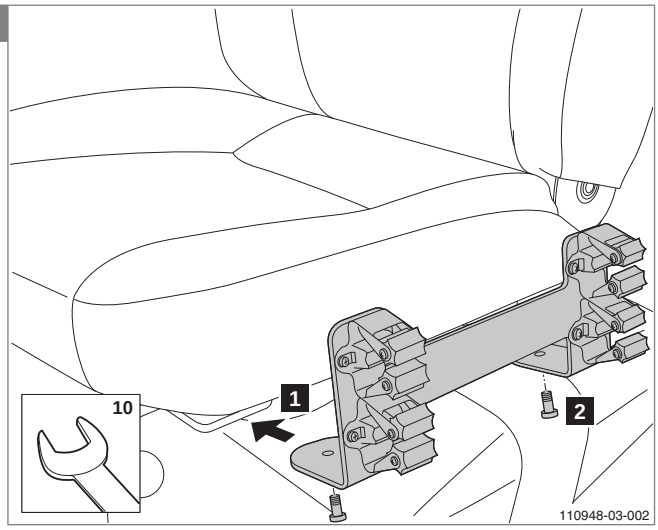
Preparation
- Switch off the scooter with the ignition key.

Instructions
The following operations are required to mount the horizontal crutch holder:
Note! Suitable work area required!
- Mount the horizontal crutch holder with two bolts on the seat frame.

Relevant article numbers
- 1003095 Crutch holder mounted to chair, horizontal

Tools used
- Open ended spanner, 10 mm

1



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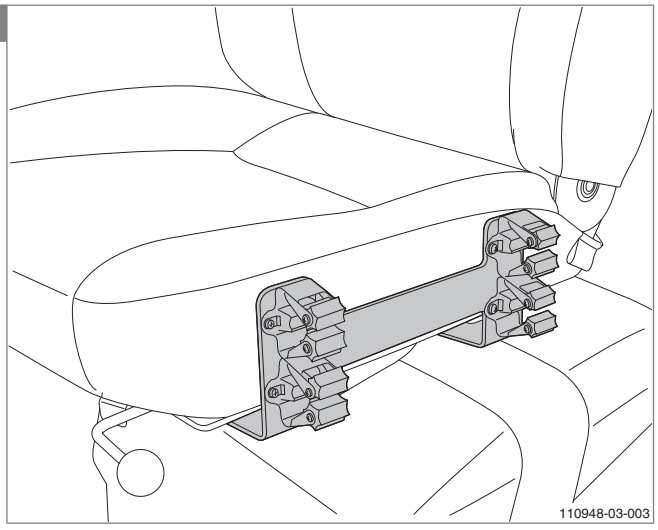


Mount the crutch holder, vertical

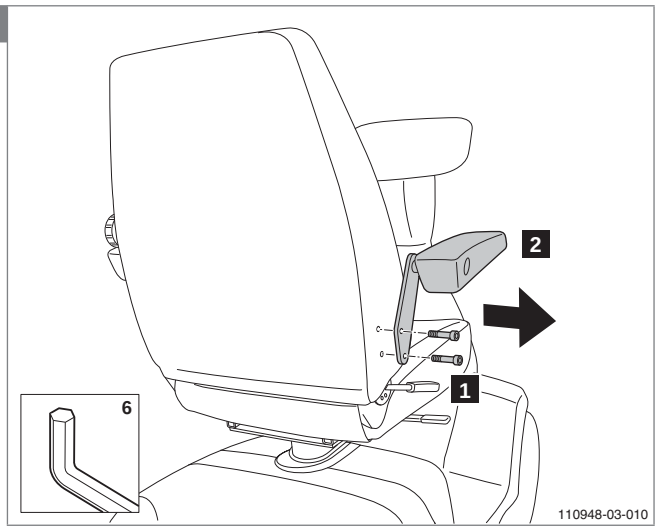
Preparation
- Switch off the scooter with the ignition key.

Instructions
The following operations are required to mount the vertical crutch holder:
Note! Suitable work area required!
- Remove the armrest from the backrest frame.
- Mount the vertical crutch holder and the armrest with two bolts back on the backrest frame.

Relevant article numbers
- 2537 Crutch holder mounted to chair, vertical

Tools used
- Allen key, 6 mm

1



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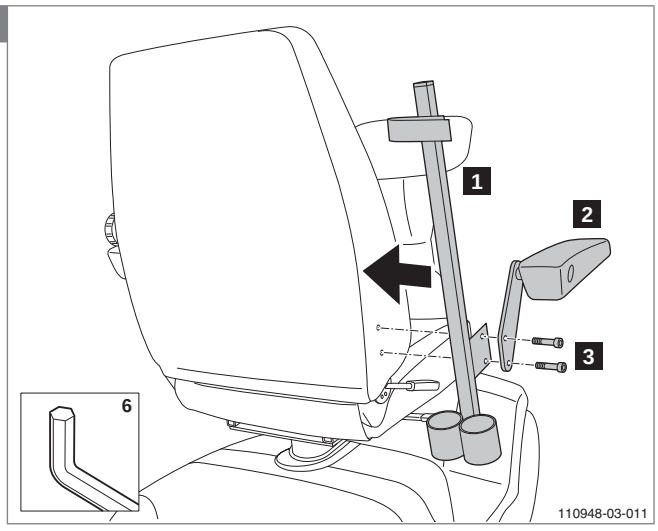


Mount the luggage carrier

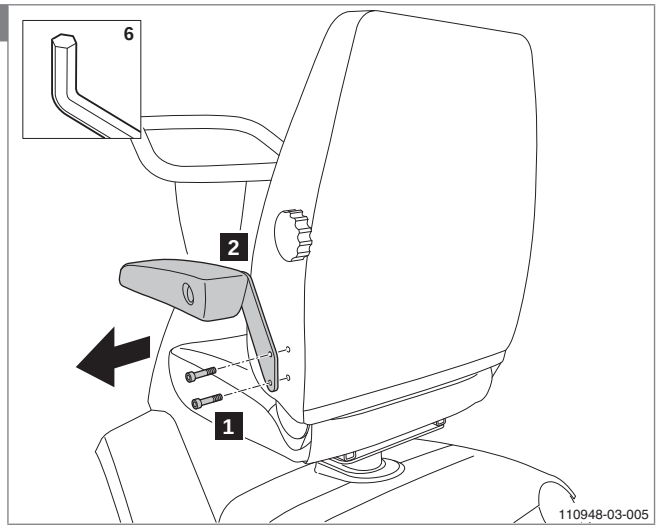
Preparation
- Switch off the scooter with the ignition key.

Instructions
The following operations are required to mount the luggage carrier:
Note! Suitable work area required!
- Remove the armrest from the backrest frame.
- Mount with the two bolts on every side the luggage carrier on the backrest frame.

Relevant article numbers
- 1001813 Luggage carrier

Tools used
- Allen key, 6 mm

1



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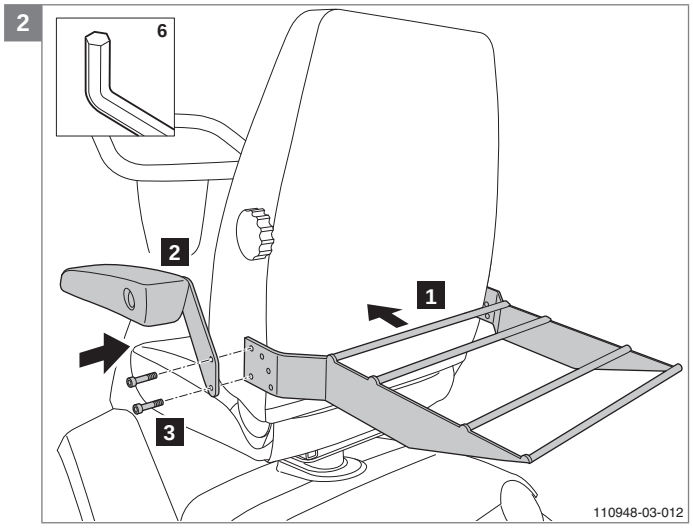


Mount the walking aid holder

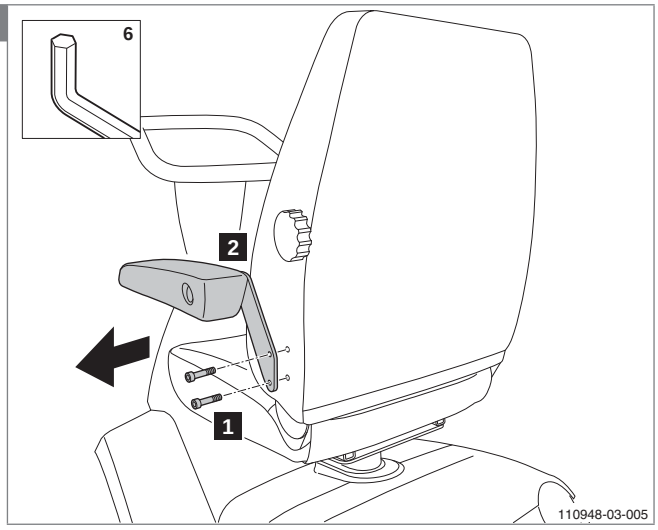
Preparation
- Switch off the scooter with the ignition key.

Instructions
The following operations are required to mount the walking aid holder:
Note! Suitable work area required!
- Remove the armrest on both sides from the backrest frame.
- Mount with the two bolts on every side the walking aid holder on the backrest frame.

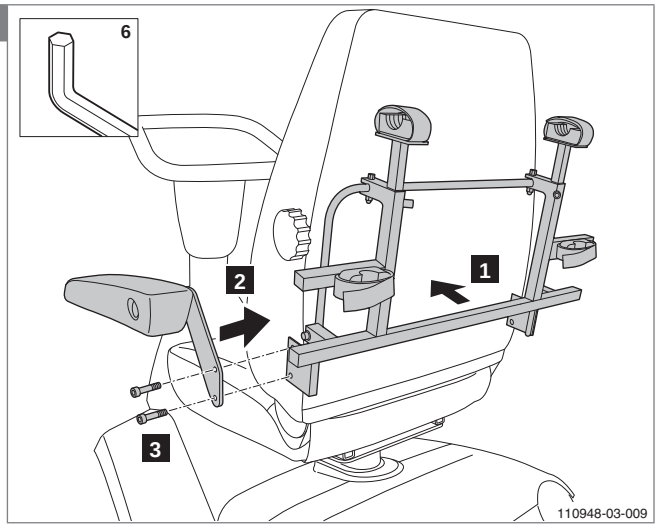
Relevant article numbers
- 1001814 Walking aid holder

Tools used
- Allen key, 6 mm

1



2



Mount the mounting bracket

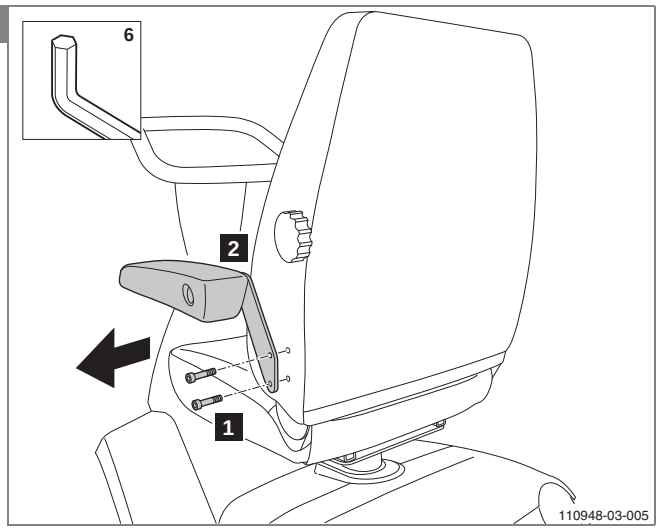
Preparation
- Switch off the scooter with the ignition key.

Instructions
The following operations are required to mount the mounting bracket:
Note! Suitable work area required!
- Remove the armrest on both sides from the backrest frame.
- Mount with the two bolts on every side the mounting bracket on the backrest frame.
- Put the basket or trolley bag on the mounting bracket.

Relevant article numbers
- 9000620 Mounting bracket rear
- 4930 Basket
- 1015545 Trolley bag

Tools used
- Allen key, 6 mm

1



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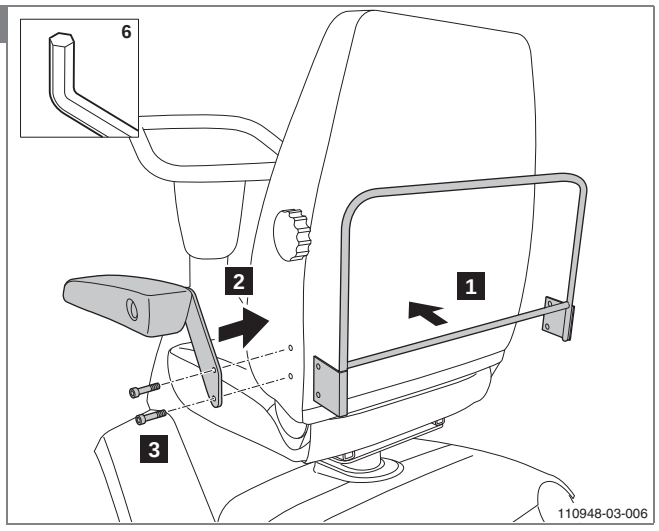
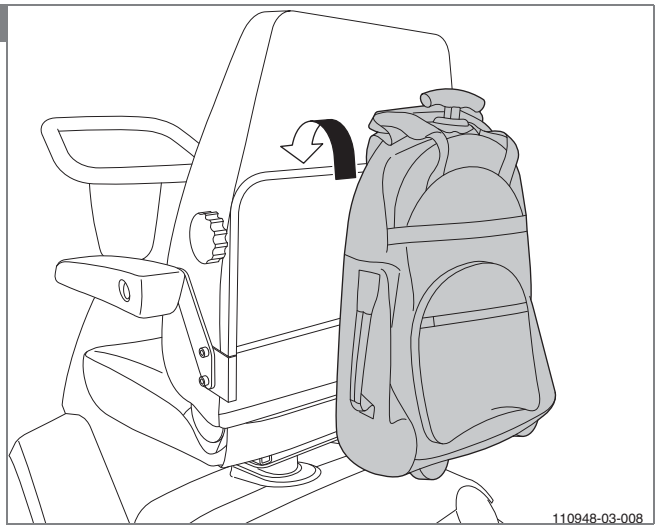


3

4



Mount the lap strap with roll-up to the Master seat

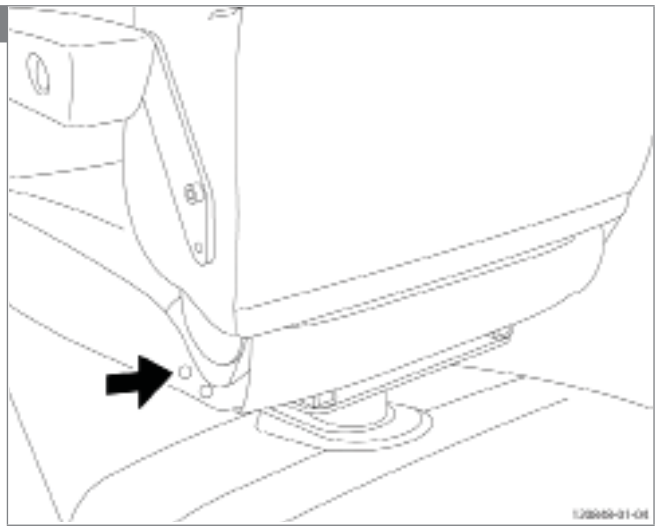
Preparation
- Switch off the scooter with the ignition key.

Instructions
The following operations are required to mount the lap strap with roll-up to the Master Seat:
Note! Suitable work area required!
- Unzip the cover from the Master seat
- The frame has a hole on the left and right side. Make on both sides (at the level of the hole) a notch in the cover.
- Left side: The locknut needs to be mounted on the inside of the frame.
- Right side: The plastic bushings and pivot van needs to be used on the right side.
- When everything is mounted, place the black cap on the bolts.
- Turn the flaps of the cover with velcro inside and close the zipper carefully. Fold also the zipper back inside.

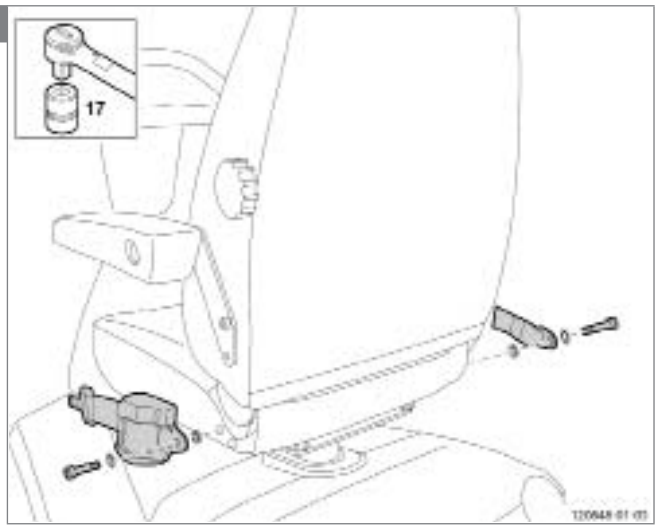
Relevant article numbers
- 1015507 Lap strap with roll-up for Master Seat

Tools used
- Socket, 17 mm

1



2



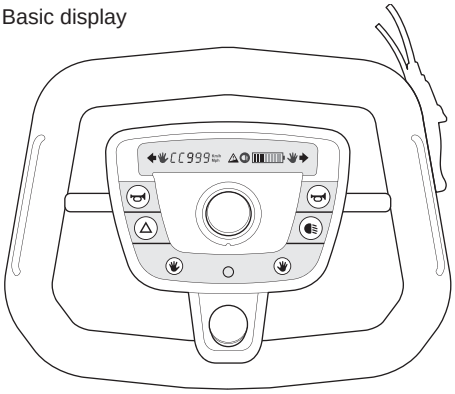
5.4.7 Upgrade instructions controllers

Mount the foot throttle for advanced electronics (ID-no > QT02400)

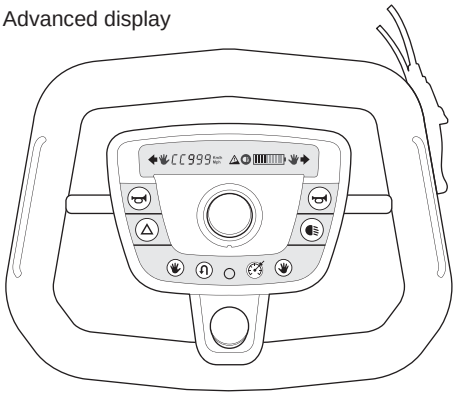
Preparation
- Switch off the scooter with the ignition key.
- Disconnect the batteries.

Instructions

Basic display



Advanced display



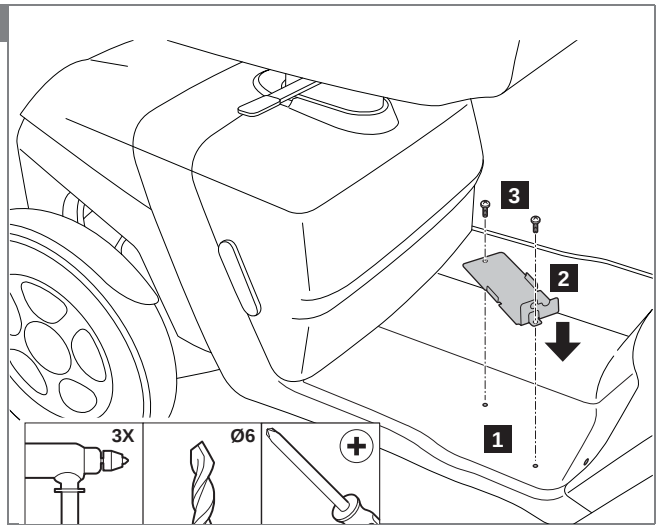
Note! This procedure is intended for the Throphy with the latest electronics. In case your Trophy has the dashboard as one above, you have the latest version electronics. Contact Handicare in case you have another dashboard (original electronics ID-no < QT02400).

The following operations are required to mount the foot throttle:
Note! Suitable work area required!
Note! Remove always one finger-control! Replace it with cover steering wheel 9007423.
Note! In case you have a basic display, a advanced display will be delivered with the foot throttle. Dismount the basic display and mount the advanced display.
- Loosen the floor mat from the frame.
  Note! For mounting the foot throttle on the floor mat you have to drill two holes in the floor mat and frame. Be sure you will not damage any cables mounted under the frame!
- Determine the exact laying of the cables under the frame.
- Reposition the cables in case they will be damaged while drilling the two holes.
- Replace the floor mat and position the foot throttle mounting plate on the floor mat.
- Drill the holes and mount the foot throttle mounting plate.
- Mount the foot throttle on the mounting plate.
- Guide the cable trough and under the frame, to the electronics compartment on the backside of the scooter.
- Remove the rear cover.
- Connect the plug to the socket in the electronics compartment and replace the rear cover.

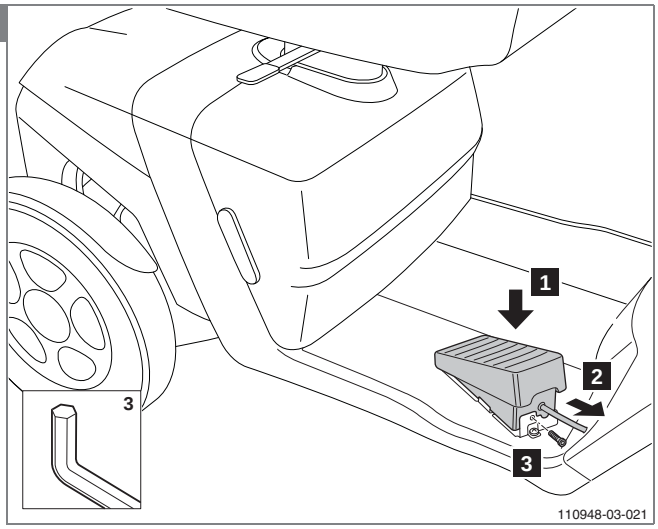
Relevant article numbers
- 9007083 Foot throttle Advanced electronics
- 1008730 4,8x19 self tapping screw

Tools used
- Allen key, 3 mm
- Metal drill, 6 mm
- Drill
- Screwdriver, crosshead

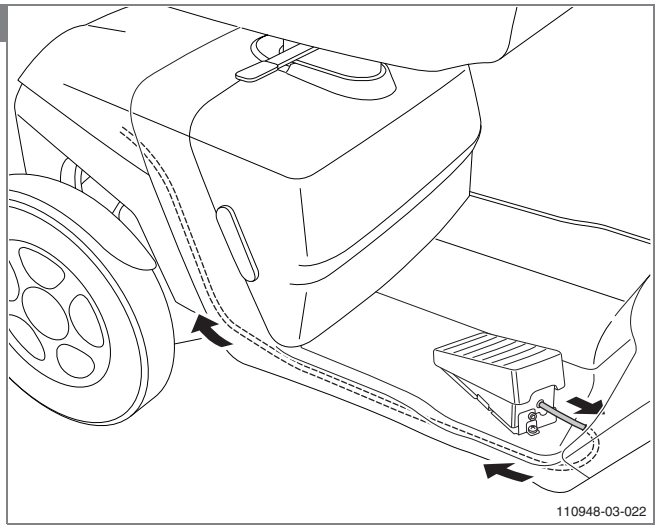
1



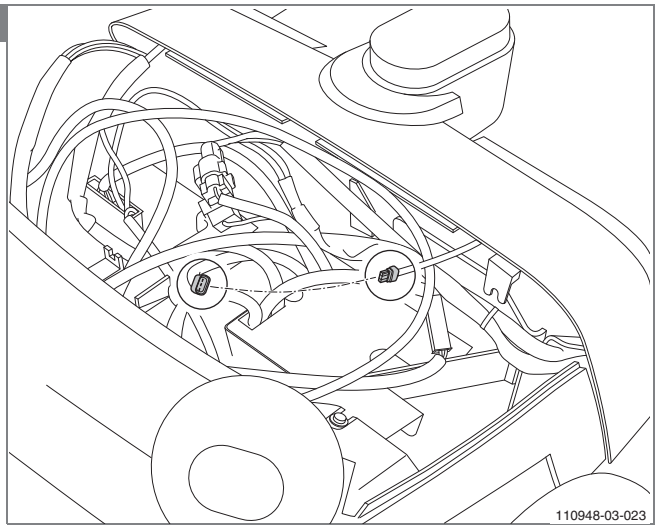
2



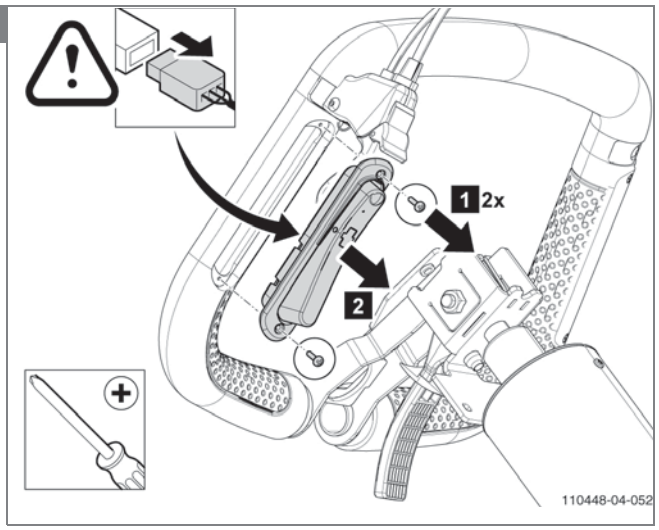
3



4



5



Expand controller options for advanced electronics (ID-no > QT02400)
Function button foils on dashbord

	Basic foil	Advanced foil
Left throttle selection switch	Yes	Yes
Revers switch for foot throttle	No	Yes
Display menu selection switch	Yes	Yes
Cruise control switch	No	Yes
Right throttle selection switch	Yes	Yes

Trophy's equipped with the finger/hand control the basic foil will be used If the foot throttle and/or cruise control is chosen, the advanced foil (with all icons) will be used. Be aware that the switches are always visible on the foil but not working when an option is not selected.

Upgrade can be done via spare part options (see matrix below):

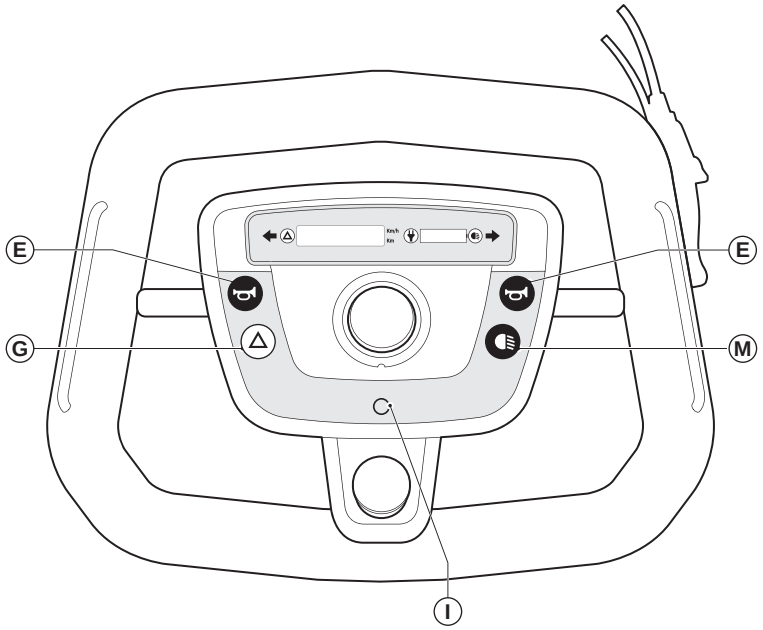
to / from	Right hand	Left hand	Foot	Hand/foot	Dual hand	CC	Emergency stop
Right hand	-	0	2	2+4	1+4	5+7+8 or (9)	8
Left hand	0	-	2	2+4	1+4	5+7+8 or (9)	8
Foot	1	1	-	1+4	2x1+4	5+8 or (9)	8
Hand/foot	0	0	0	-	1	5+8 or (9)	8
Dual hand	0	0	2	2	-	5+7+8 or (1+9)	8
CC (only works with 8)	standard	0	10	10	1	-	standard

0. Only remove/replay parts
1. 1008055 Throttle potentiometer
2. 9007569 Assy foot throttle incl. assy top full option (7)
3. 9008789 Tiller PCB Basic
4. 9008791 Tiller PCB Dual control
5. 9008790 Tiller PCB Full option
6. 9007568 Assy top standard (basic foil)
7. 1012535 Assy top full option (advanced foil)
8. 9006138 Emergency stop button
9. 1016535 Full option steering wheel (includes 1+5+7+8)
10. 9007499 Assy foot throttle

Since Full option steering wheel only means to exchange the complete steering wheel, this may be advisable to use always as upgrade for Cruise Control on single hand/finger control.
Cruise control will only work together with the Emergency Stop Button. If this button doesn’t function or isn’t present, the scooter will give an error and will not start. (Safety!)

5.5 Display menu settings

Starting the service menu for original electronics (ID-no < QT02400)



Dealer

△ + horn	Kilometer total (user)	Hold the hazard light button and press the left horn button briefly
R	Reset total (user	Push the I button (3 sec.)
△ + horn	Kilometer total (scooter)	Hold the hazard light button and press the left horn button briefly
△ + horn	Hours-on total (scooter)	Hold the hazard light button and press the left horn button briefly
△ + horn	Battery voltage	Hold the hazard light button and press the left horn button briefly
light	Leave dealer menu	Any other button

User

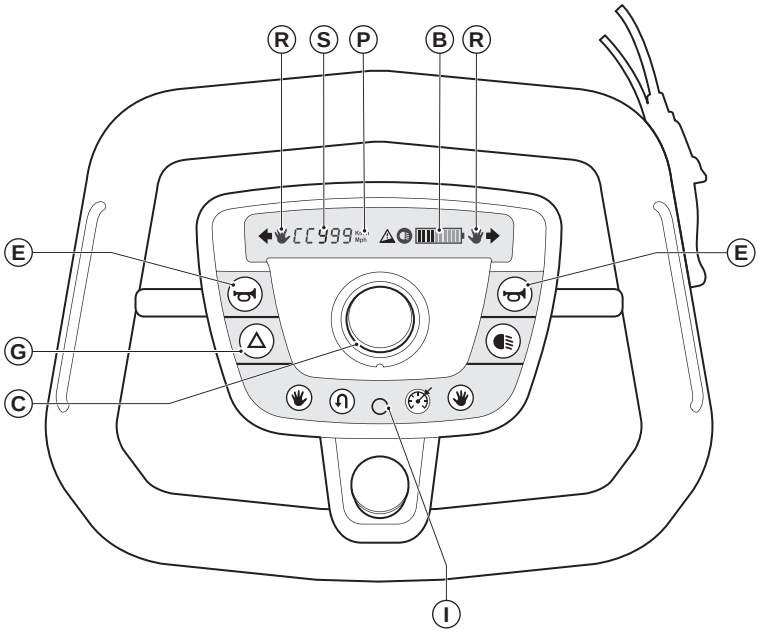
R	km/h	Push the I button
R	Daily kilometer counter	Push the I button
R	Reset daily counter	Push the I button (3 sec)
R	Kilometer total (user)	Push the I button

It's possible to fit the Trophy with either one foot throttle, one hand throttle or two hand throttles. See technical diagram chapter 7.

⚠ ***Warning!***
A combination of foot throttle and finger control is not possible.

Any guarantee on the Trophy is invalidated by the third-party fitting of electronic circuits, other than as described below, which interfere with the finger control or foot throttle signal.

Starting the service menu for advanced electronics (ID-no > QT02400)



Pushing the hazard-button (G) together with the claxon-button (E) more than 2 seconds, the service menu shall be visible.
- First information shown after starting the service menu is the “Total km-1”
- Pushing the hazard button again (G) allows you to scroll through the menu shown below.
- If any other button (other than the DSS (I), horn (E), hazard button (G)) is switched during the service menu, the display returns to the user menu and will show “actual speed”

When the batteries of the scooter are removed the service information shall not get lost for at least 1 year.

The display will blink at a frequency of 1-2HZ, indicating this value can be changed.

1. Total km-1 (S)
   The amount of km the scooter has driven after the last time this value was reset.
   Resettable by pressing the DSS (I) switch ≥ 2 seconds.

2. Total km-2 (S)
   The amount of km the scooter has ever driven in its total life.

3. Actual battery voltage (B)
   The actual battery voltage measured real time

4. Hours ON
   The amount of hours the scooter has been switched on in its life.
   First one character of the display show: H

5. Hours Driven
   The amount of hours the scooter has driven more than 5% of its maximum speed in its life.
   First one character of the display show: h

6. Software version
   First one character of the display show: F

7. Signal Actual throttle input: Range
   Actual input of the active throttle available (R)
   First characters of the display show: C
   The Icons on the tiller display will indicate the active throttle:
   - right hand is lit: right hand side throttle is active
   - left hand is lit: left hand side throttle is active
   - no hand icons are lit: foot throttle is active

   Foot throttle information is converted by the MC into a drive signal. This signal will be presented here. OK

8. Miles / hour reset (P)
   Set speed and distance calculations to km or miles.
   - Km icon on display is shown = km: km per hour
   - m icon on display is shown = miles: miles per hour

   Default: km
   Change by pressing the DSS (I) switch ≥ 2 seconds.

9. Scooter type selection.
   This reflects the diameter of the wheels used.
   - “t30” Trophy speed algorithm (Trophy 30)
   - “t20” Trophy speed algorithm (Trophy 20)

   Default: “t30”
   Change by pressing the DSS (I) switch ≥ 2 seconds.

10. This reflects if a beeping sound is enabled
    - "0" no beep when driving backward
    - "1" beeping when driving backward

    default: "1"
    Change by pressing the DSS (I) switch ≥ 2 seconds
    First one character of the display show: b

Setting the options
Not all options are standard available. Some options are only available as ordered at Handicare. Not activated values will not be shown in the service menu.

11. Cruise Control enable (S)
    - “0” disabled
    - “1” enabled

    Default: “0” = disabled
    Change by pressing the DSS (I) switch ≥ 2 seconds.
    First two characters of the display show: CC

12. Manual / intelligent throttle switch
    - “0” off
    - “1” Manual Throttle Switching (MTS)
    - “2” Intelligent Throttle Switching (ITS)
    - “3” ITS and MTS active

    Default: “0” = off
    Change by pressing the DSS (I) switch ≥ 2 seconds.
    First two characters of the display show: tS

6 Troubleshooting

If the scooter doesn't function, while the batteries are fully charged, check the following points.
A. Set the scooter off and then on again. Check if the problem is solved.
B. Check if all the battery connectors are properly attached and firmly connected.
C. Check whether the freewheel handle is in the DRIVE position.
D. Make sure the position of the speed controller has not changed.
E. If there is a problem, the lights of the battery condition meter flash. Use the table below to determine the cause of the problem.

Indication on the display	Description of problem	Corrective action
The complete LED bar flashes rapidly.	The Controller security has found something that causes a problem.	Switch off the scooter. Check all connectors. Check the condition of the batteries. Consult the manufacturer if the LED bar continues flashing after the scooter has been switched on.
The socket LED is lit continuously after the scooter is switched on.	Short circuit in the potentiometer. Cabling from the Tiller PCB to the controller interface is defective. Cabling from the Tiller PCB to the touch control is defective. Tiller PCB is defective.	Contact the manufacturer.
The first red LED of the LED bar is lit continuously.	The batteries require charging or there is a poor connection to the batteries.	Check all connections between the controllers and the batteries. If the connections are OK, try recharging the batteries.
LED bar left to right chase.	The batteries are being charged.	Disconnect the battery charger from the scooter.
Two LEDs of the LED bar are lit.	There is a poor connection to the motor.	Check all connections between the controller and the motor.
Three LEDs of the LED bar are lit.	There is a short circuit in the motor.	Check the motor cables or replace the motor.
Seven LEDs of the LED bar are lit.	The throttle was held in during start up. Speed potentiometer fault.	Restart the scooter without pressing the throttle. Check or replace the speed potentiometer.
Eight LEDs of the LED bar are lit.	The controller is malfunctioning.	Replace the controller.
Nine LEDs of the LED bar are lit.	The neutral handle is in the neutral position. The brake is malfunctioning.	Put the neutral handle in the drive position. Check the connections between the brake and the controller. Replace the brake.
Ten LEDs of the LED bar are lit.	The battery is malfunctioning.	Check the connections between the batteries and the controller. Check the batteries.

The table below provides explanation for the trip codes that can be indicated by the controller. These trip codes can be read with the manual programming unit (SP1) or the mobility programmer PG.

LED code	Trip code	Error type	Explanation
1	2c00	Low battery error	Low battery voltage
1	2c01	Low battery error	Low battery voltage
2	3B01	Motor fault 1	Motor disconnected
3	1400	Bridge fault 1	Motor wiring fault
4	7000	Startup with push selected	Parking brake off
4	7001	Push activated in drive mode	Parking brake off
6	1e03	Inhibit activated	Inhibit active
7	0810	Tiller fault 1	Throttle trip
7	0814	Tiller reference error	Throttle trip
7	0815	Tiller lo reference error	Throttle trip
7	0816	Tiller high reference iso error	Throttle trip
7	0817	Tiller lo reference error	Throttle trip
7	0300	Speed Limit Potentiometer wiper open	Throttle trip
7	1d02	Front end spec change trip	Throttle potentiometer trip
7	2f01	Tiller displaced error	Throttle displaced at power up
8	0002	Eeprom calibration checksum error 2	Possible controller trip
8	0003	Eeprom program checksum error 2	Possible controller trip
8	0100	Running checksum 1	Possible controller trip
8	0203	Eeprom calibration checksum error 1	Possible controller trip
8	0204	Eeprom program checksum error 1	Possible controller trip
8	1501	Brake fault 2	Possible controller trip
8	1705	Relay fault 1	Possible controller trip
8	1802	Watchdog voltage ref error	Possible controller trip

8	1805	Salty finger ref error	Possible controller trip
8	1b20	Both clamps measuring current	Possible controller trip
8	2102	Progres counter error	Possible controller trip
8	2d01	Front end spec change trip	Possible controller trip
8	3100	Battery bridge difference error 1	Possible controller trip
8	3102	Temperature settings incorrect	Possible controller trip
8	3210	No internal timers	Possible controller trip
8	3211	Internal timer out of range	Possible controller trip
8	3212	Atod readings not finished before next read	Possible controller trip
8	3213	Unknown mux channel	Possible controller trip
8	3600	Hardware error	Possible controller trip
8	3601	Test trip latch 1	Possible controller trip
8	3602	Test trip latch 2	Possible controller trip
8	3603	Test trip latch 3	Possible controller trip
8	3608	Test trip latch 8	Possible controller trip
8	3609	Test trip latch 9	Possible controller trip
8	360a	Test trip latch 10	Possible controller trip
8	360b	Test trip latch 11	Possible controller trip
8	360c	Test trip latch 12	Possible controller trip
8	360d	Test trip latch 13	Possible controller trip
8	360e	Test trip latch 14	Possible controller trip
8	4401	Generic ctrl error	Possible controller trip
9	1500	Brake fault 1	Solenoid brake fault
9	1502	Brake over current error	Solenoid brake fault
10	1600	High battery error	High battery voltage

7 Technical product information

7.1 CE Declaration and standards

This product complies with the regulations of the Medical Devices Directive and therefore bears the CE mark.

Standard	Definition/description	Weight test dummy
EU guideline 93/42 EEC	Applicable as mentioned in Appendix 1	N/A
NEN-EN 12182 (1999)	The requirements from EN12182 as mentioned in NEN-EN 12184 (1999): Technical aids for the handicapped – General requirements and test methods October 1997	160 kg
NEN-EN 12184 (1999) Class C	Electric wheelchairs, scooters and accompanying battery chargers – Requirements and test methods 2009	160 kg
ISO 7176-8	Requirements and test methods for static, impact and fatigue strengths July 1998	160 kg
ISO 7176-9	Climate tests for electric wheelchairs and scooters	N/A
ISO 7176-14	Requirements and test methods for control systems for electric wheelchairs 1997	N/A
ISO 7176-16	Requirements for resistance to ignition of upholstered parts May 1997	N/A

7.2 Technical specifications

Manufacturer	Handicare®
Model	Trophy 3 wheels (3W) Trophy 4 wheels (4W)
Maximum user weight	160 kg (25.2 stone)

Description		3W	4W
Total length	mm (inches)	1400 (55.1)	1400 (55.1)
Total width	mm (inches)	660 (26)	660 (26)
Minimum height*	mm (inches)	760 (29.9)*	760 (29.9)*
Total weight excluding batteries	kg (stones)	110 (17.3)	121 (19.1)
Total weight including batteries (80 Ah)	kg (stones)	155 (24.4)	166 (26.1)
Weight of heaviest component	kg (stones)	90 (14.2)	101 (15.9)
Static stability in the downward direction	°	15	15
Static stability in the upward direction	°	15	15
Lateral static stability	°	15	15
Distance range (ISO 7176-4)**	km (miles)	60 (37.3)	60 (37.3)
Dynamic stability	°	11 (Alpine 14)	11 (Alpine 14)
Maximum speed forwards	km/h (mph)	15 (Alpine 11) (9.3, Alpine 6.8)	15 (Alpine 11) (9.3, Alpine 6.8)
Back angle	°	45 - 85 - 180	45 - 85 - 180
Effective seat depth	mm (inches)	430 (16.9)	430 (16.9)
Effective seat width	mm (inches)	500 (19.7)	500 (19.7)
Back height (excl. head rest)	mm (inches)	550 (21.7)	550 (21.7)
Seat height (front edge of seat)	mm (inches)	min 420 - max 550 (min 16.5 - max 21.2)	min 420 - max 550 (min 16.5 - max 21.2)
Armrest height	mm (inches)	min 150 - max 340 (min 5.9 - max 13.4)	min 150 - max 340 (min 5.9 - max 13.4)
Front armrest to backrest	mm (inches)	260 (10.3)	260 (10.3)
Distance between armrests	mm (inches)	457 - 610 (18 - 24)	457 - 610 (18 - 24)
Turning radius (ISO 7176-5)	mm (inches)	1250 (49.2)	1750
Reversing width	mm (inches)	1650 (65)	1940 (76.4)
Obstacle height (max. user weight)	mm (inches)	100 (3.9)	100 (3.9)
Ground clearance (max. user weight / loaded)	mm (inches)	70 (2.8)	70 (2.8)

Test data	
Test weight	160 kg (25.2 stone)

Operating force	
Operating handle	< 60 N
Parking brake	< 60 N
Electronic switches	< 13.5 [N]
Connecting the charger plug	< 60 [N]

Technical specifications for wheels		
Front wheel diameter (3W)	mm (inches)	320 x 60 (12.5 x 2.25)
Front wheel diameter (4W)	mm (inches)	320 x 60 (12.5 x 2.25)
Rear wheel diameter	mm (inches)	410 x 80 (16.1 x 3.1)
Tyre pressure 4W, front wheel	bar (psi)	2,5 (36.3)
Tyre pressure 4W, rear wheel	bar (psi)	2,5 (36.3)
Tyre pressure 3W, front wheel	bar (psi)	2,5 (36.3)
Tyre pressure 3W, rear wheel	bar (psi)	2,5 (36.3)

Batteries		
Maximum dimensions of batteries (lxbxh)	mm (inches)	334 x 178 x 253 (13.1 x 7 x 10)
Max. battery capacity C20	Ah	86
Max. battery capacity C5	Ah	72
Maximum permissible charging voltage	Voltage	13.6
Maximum permitted charging current	Ampère	12 RMS

* Excluding seat and tiller folded down
** range dependent on user weight, condition of tyres, type of terrain, condition of battery and weather conditions with 80 Ah (C20)

7.3 Driving programs

The driving programs for Handicare products can be found on our FTP server.
Log on to the FTP server:

- Open internet explorer
- Go to ftp://mobilityftp.handicare.com
- Enter user name and password
  User name: dealer@mobilityftp.handicare.com
  Password: dealer
- You will be logged on
- Select your wheelchair and the appropriate controller
- Click the file to download

7.4 Controller settings PG Drives Egis

Trophy Egis 120, 15 km/h

Speed Settings	Fast	Slow
Forward Acceleration (0,1 Seconds)	25	25
Forward Deceleration (0,1 Seconds)	13	13
Reverse Acceleration (0,1 Seconds)	40	40
Reverse Deceleration (0,1 Seconds)	25	25
Forward Speed (%)	100	100
Reverse Speed (%)	50	50

Operation Settings		
Sleep timer (minutes)	0	
Throttle Invert	On	

Battery Settings		
Low battery Flash Inhibit	On	
TruCharge Cable Resistance (milli-Ohms)	40	
TruCahrge Calibration	97	
Max Charge Amps (0,1 Amps)	15	
Min Charge Amps (0,1 Amps)	0	

Inhibit Settings		
Inhibit Mode	1	

General Settings		
Soft Stop	On	
Output Voltage (Volts)	24	
Pulsed Reverse Alarm	Off	
Brake Time (0,01 Seconds)	60	
Freewheel Voltage	100	
Freewheel Time-out (0,01 Seconds)	20	

Factory Settings	Max	Min
Forward Acceleration (0,1 Seconds)	100	1
Forward Deceleration (0,1 Seconds)	100	1
Reverse Acceleration (0,1 Seconds)	100	1
Reverse Deceleration (0,1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

Advanced Settings		
Profile Top	40	
Profile Bottom	80	

Throttle Settings		
Wig-Wag Throttle	On	
Throttle Deadband (%)	15	
Throttle Gain (%)	130	
Iso Test	On	

Options Settings		
Options Register	17	

Motor Settings		
Current Limit Max (Amps)	110	
Curerent Foldback Time (Seconds)	15	
Current Foldback Level (%)	50	
Hold Factor (%)	160	
Bridge Hold Time (centi-Secs)	80	
Motor Compensation (milli Ohms)	45	

Trophy Egis 120, 15 km/h, foot throttle

Speed Settings	Fast	Slow
Forward Acceleration (0,1 Seconds)	25	25
Forward Deceleration (0,1 Seconds)	13	13
Reverse Acceleration (0,1 Seconds)	40	40
Reverse Deceleration (0,1 Seconds)	25	25
Forward Speed (%)	100	100
Reverse Speed (%)	40	40

Operation Settings		
Sleep timer (minutes)	0	
Throttle Invert	Off	

Battery Settings		
Low battery Flash Inhibit	On	
TruCharge Cable Resistance (milli-Ohms)	40	
TruCahrge Calibration	97	
Max Charge Amps (0,1 Amps)	15	
Min Charge Amps (0,1 Amps)	0	

Inhibit Settings		
Inhibit Mode	1	

General Settings		
Soft Stop	On	
Output Voltage (Volts)	24	
Pulsed Reverse Alarm	Off	
Brake Time (0,01 Seconds)	60	
Freewheel Voltage	100	
Freewheel Time-out (0,01 Seconds)	20	

Factory Settings	Max	Min
Forward Acceleration (0,1 Seconds)	100	1
Forward Deceleration (0,1 Seconds)	100	1
Reverse Acceleration (0,1 Seconds)	100	1
Reverse Deceleration (0,1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

Advanced Settings		
Profile Top	40	
Profile Bottom	80	

Throttle Settings		
Wig-Wag Throttle	Off	
Throttle Deadband (%)	15	
Throttle Gain (%)	120	
Iso Test	On	

Options Settings		
Options Register	17	

Motor Settings		
Current Limit Max (Amps)	110	
Curerent Foldback Time (Seconds)	15	
Current Foldback Level (%)	50	
Hold Factor (%)	156	
Bridge Hold Time (centi-Secs)	80	
Motor Compensation (milli Ohms)	45	

7.5 Controller settings PG Drives S-Drive 120A

Trophy S-drive 120, 15 km/h

Speed Settings	Fast	Slow
Forward Acceleration (0,1 Seconds)	35	35
Forward Deceleration (0,1 Seconds)	13	13
Reverse Acceleration (0,1 Seconds)	40	40
Reverse Deceleration (0,1 Seconds)	25	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	10	10
Max Reverse Speed (%)	40	40
Min Reverse Speed (%)	5	5
Speed Limit Pot Enabled	On	

Operation Settings		
Sleep timer (minutes)	0	
Throttle Invert	Yes	

Battery Settings		
Low battery Flash Level (Bars)	0	
Cable Resistance (milli-Ohms	50	
Calibration Factor	100	
Low Battery Alarm	Off	

Inhibit Settings		
Inhibit 1: Mode	1	
Inhibit 1: Operation	Latching	
Inhibit 1: Speed (%)	0	
Inhibit 2: Mode	1	
Inhibit 2: Operation	Latching	
Inhibit 2: Speed (%)	0	
Inhibit 3: Mode	1	
Inhibit 3: Operation	Latching	
Inhibit 3: Speed (%)	0	
Aux Output: Mode	0	

Factory Settings	Max	Min
Acceleration (0,1 Seconds)	100	1
Deceleration (0,1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

Throttle Settings		
Throttle Type	1	
Throttle Deadband (%)	15	
Throttle Gain (%)	140	
Throttle Operated at Power-up	2	0 = Drive, 1 = Inhibit, 2 = Trip
Throttle Reference Test	On	
Iso Test Resistor	Off	

Motor Settings		
Current Limit Max (Amps)	110	
Boost Drive Current (Amps)	120	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	110	
Curerent Foldback Time (Seconds)	15	
Current Foldback Level (%)	50	
Motor Cooling Time (Seconds)	120	
Current Foldback Temperature (Deg C)	80	
Current Limit Min (Amps)	18	
Motor Compensation (milli Ohms)	20	
Anti Rollback Level	12	
Pull-away Delay (centi-Seconds)	0	
Slope Factor	1275	
Anti Rollback Velocity	0	

General Settings		
Soft Stop	On	
Brake Time (milli-seconds)	1500	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Freewheel Speed Limit	35	
Freewheel Time Out (0,01 Seconds)	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	

Trophy S-drive 120, 15 km/h, foot throttle

Speed Settings	Fast	Slow
Forward Acceleration (0,1 Seconds)	35	35
Forward Deceleration (0,1 Seconds)	13	13
Reverse Acceleration (0,1 Seconds)	40	40
Reverse Deceleration (0,1 Seconds)	25	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	10	10
Max Reverse Speed (%)	40	40
Min Reverse Speed (%)	5	5
Speed Limit Pot Enabled	On	

Operation Settings		
Sleep timer (minutes)	0	
Throttle Invert	No	

Battery Settings		
Low battery Flash Level (Bars)	0	
Cable Resistance (milli-Ohms	50	
Calibration Factor	100	
Low Battery Alarm	Off	

Inhibit Settings		
Inhibit 1: Mode	1	
Inhibit 1: Operation	Latching	
Inhibit 1: Speed (%)	0	
Inhibit 2: Mode	1	
Inhibit 2: Operation	Latching	
Inhibit 2: Speed (%)	0	
Inhibit 3: Mode	1	
Inhibit 3: Operation	Latching	
Inhibit 3: Speed (%)	0	
Aux Output: Mode	0	

Factory Settings	Max	Min
Acceleration (0,1 Seconds)	100	1
Deceleration (0,1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

Throttle Settings		
Throttle Type	0	
Throttle Deadband (%)	15	
Throttle Gain (%)	180	
Throttle Operated at Power-up	2	0 = Drive, 1 = Inhibit, 2 = Trip
Throttle Reference Test	On	
Iso Test Resistor	Off	

Motor Settings		
Current Limit Max (Amps)	110	
Boost Drive Current (Amps)	120	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	110	
Curerent Foldback Time (Seconds)	15	
Current Foldback Level (%)	50	
Motor Cooling Time (Seconds)	120	
Current Foldback Temperature (Deg C)	80	
Current Limit Min (Amps)	18	
Motor Compensation (milli Ohms)	20	
Anti Rollback Level	12	
Pull-away Delay (centi-Seconds)	0	
Slope Factor	1275	
Anti Rollback Velocity	0	

General Settings		
Soft Stop	On	
Brake Time (milli-seconds)	1500	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Freewheel Speed Limit	35	
Freewheel Time Out (0,01 Seconds)	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	

7.6 Controller settings PG Drives S-Drive 140A

Trophy S-drive 140, 15 km/h original electronics (ID-no < QT02400)

Speed Settings	Fast	Slow
Forward Acceleration (0.1 Seconds)	35	30
Forward Deceleration (0.1 Seconds)	13	12
Reverse Acceleration (0.1 Seconds)	40	40
Reverse Deceleration (0.1 Seconds)	25	15
Max Forward Speed (%)	100	50
Min Forward Speed (%)	10	30
Max Reverse Speed (%)	40	30
Min Reverse Speed (%)	5	30
Speed Limit Pot Enabled	On	

Operation Settings	
Sleep Timer (Minutes)	0
Throttle Invert	Yes

Battery Settings	
Low Battery Flash Level (Bars)	0
Cable Resistance (milli-Ohms)	100
Calibration Factor	100
Low Battery Alarm	Off
Trucharge Reset Voltage (Deci-Volts) **(S Drive 180A) (S Drive II)**	250
Battery Curve Scaler **(S Drive II Only)**	0

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Latching
Inhibit 2 Speed (%)	0
Inihibit 3: Mode	1
Inhibit 3: Operation	Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	0

Factory Settings	Max	Min
Acceleration (0.1 Seconds)	100	1
Deceleration (0.1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

General Settings		
Soft Stop	Off	
Brake Time (milli-Seconds)	1400	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Push too Fast Threshold	35	
Push too Fast Timeout	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	**(S Drive 120,140,180A) (S Drive II)**

Motor Settings		
Current Limit Max (Amps)	130	
Boost Drive Current (Amps)	140	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	80	
Current Foldback Time (Seconds)	70	
Current Foldback Level (%)	59	
Motor Cooling Time (Seconds)	660	
Current Foldback Temperature (Deg C)	30	
Current Limit Min (Amps)	10	
Motor Stall Timeout (Seconds)	0	**(S Drive II Only)**
Motor Compensation (milli-Ohms)	25	
AntiRollback Level	12	**(S Drive Only)**
Pull-away Delay (centi-Seconds)	0	**(S Drive Only)**
Slope Factor	1275	**(S Drive Only)**
Anti Rollback Velocity	0	**(S Drive Only)**
Braking Current Limit (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Braking Current (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Speed (%)	100	**(S Drive 180A) (S Drive II)**
Enhanced Motor Compensation (Up) (%)	200	**(S Drive II Only)**
Enhanced Motor Compensation (Down) (%)	170	**(S Drive II Only)**
Enhanced Motor Compensation (Up) Gain	85	**(S Drive II Only)**

Throttle Settings		
Throttle Type	1	(0 = Single-ended, 1 = Wig-wag, 2 = Unipolar)
Throttle Deadband (%)	15	
Throttle Gain (%)	140	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
ISO Test Resistor	Off	
Timed Throttle Invert **(S Drive II Only)**	0	(0 = Off, 1 = Inhibit 2, 2 = Inhibit 3)

Trophy S-drive 140, 15 km/h, foot throttle original electronics (ID-no < QT02400)

Speed Settings	Fast	Slow
Forward Acceleration (0.1 Seconds)	35	30
Forward Deceleration (0.1 Seconds)	13	12
Reverse Acceleration (0.1 Seconds)	40	40
Reverse Deceleration (0.1 Seconds)	25	15
Max Forward Speed (%)	100	50
Min Forward Speed (%)	10	30
Max Reverse Speed (%)	40	30
Min Reverse Speed (%)	5	30
Speed Limit Pot Enabled	On	

Operation Settings	
Sleep Timer (Minutes)	0
Throttle Invert	No

Battery Settings	
Low Battery Flash Level (Bars)	0
Cable Resistance (milli-Ohms)	100
Calibration Factor	100
Low Battery Alarm	Off
Trucharge Reset Voltage (Deci-Volts) **(S Drive 180A) (S Drive II)**	250
Battery Curve Scaler **(S Drive II Only)**	0

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Latching
Inhibit 2 Speed (%)	0
Inihibit 3: Mode	1
Inhibit 3: Operation	Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	0

Factory Settings	Max	Min
Acceleration (0.1 Seconds)	100	1
Deceleration (0.1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

General Settings		
Soft Stop	Off	
Brake Time (milli-Seconds)	1400	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Push too Fast Threshold	35	
Push too Fast Timeout	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	**(S Drive 120,140,180A) (S Drive II)**

Motor Settings		
Current Limit Max (Amps)	130	
Boost Drive Current (Amps)	140	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	80	
Current Foldback Time (Seconds)	70	
Current Foldback Level (%)	59	
Motor Cooling Time (Seconds)	660	
Current Foldback Temperature (Deg C)	30	
Current Limit Min (Amps)	10	
Motor Stall Timeout (Seconds)	0	**(S Drive II Only)**
Motor Compensation (milli-Ohms)	25	
AntiRollback Level	12	**(S Drive Only)**
Pull-away Delay (centi-Seconds)	0	**(S Drive Only)**
Slope Factor	1275	**(S Drive Only)**
Anti Rollback Velocity	0	**(S Drive Only)**
Braking Current Limit (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Braking Current (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Speed (%)	100	**(S Drive 180A) (S Drive II)**
Enhanced Motor Compensation (Up) (%)	200	**(S Drive II Only)**
Enhanced Motor Compensation (Down) (%)	170	**(S Drive II Only)**
Enhanced Motor Compensation (Up) Gain	85	**(S Drive II Only)**

Throttle Settings		
Throttle Type	0	(0 = Single-ended, 1 = Wig-wag, 2 = Unipolar)
Throttle Deadband (%)	15	
Throttle Gain (%)	180	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
ISO Test Resistor	Off	
Timed Throttle Invert **(S Drive II Only)**	0	(0 = Off, 1 = Inhibit 2, 2 = Inhibit 3)

Trophy S-drive 140 Alpine original electronics (ID-no < QT02400)

Speed Settings	Fast	Slow
Forward Acceleration (0.1 Seconds)	35	30
Forward Deceleration (0.1 Seconds)	13	13
Reverse Acceleration (0.1 Seconds)	40	40
Reverse Deceleration (0.1 Seconds)	25	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	10	10
Max Reverse Speed (%)	40	40
Min Reverse Speed (%)	5	5
Speed Limit Pot Enabled	On	

Operation Settings	
Sleep Timer (Minutes)	0
Throttle Invert	Yes

Battery Settings	
Low Battery Flash Level (Bars)	0
Cable Resistance (milli-Ohms)	100
Calibration Factor	100
Low Battery Alarm	Off
Trucharge Reset Voltage (Deci-Volts) **(S Drive 180A) (S Drive II)**	250
Battery Curve Scaler **(S Drive II Only)**	0

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Latching
Inhibit 2 Speed (%)	0
Inihibit 3: Mode	1
Inhibit 3: Operation	Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	1

Factory Settings	Max	Min
Acceleration (0.1 Seconds)	100	1
Deceleration (0.1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

General Settings		
Soft Stop	On	
Brake Time (milli-Seconds)	1500	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Push too Fast Threshold	35	
Push too Fast Timeout	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	**(S Drive 120,140,180A) (S Drive II)**

Motor Settings		
Current Limit Max (Amps)	130	
Boost Drive Current (Amps)	130	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	80	
Current Foldback Time (Seconds)	70	
Current Foldback Level (%)	59	
Motor Cooling Time (Seconds)	660	
Current Foldback Temperature (Deg C)	30	
Current Limit Min (Amps)	10	
Motor Stall Timeout (Seconds)	0	**(S Drive II Only)**
Motor Compensation (milli-Ohms)	35	
AntiRollback Level	12	**(S Drive Only)**
Pull-away Delay (centi-Seconds)	0	**(S Drive Only)**
Slope Factor	650	**(S Drive Only)**
Anti Rollback Velocity	0	**(S Drive Only)**
Braking Current Limit (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Braking Current (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Speed (%)	100	**(S Drive 180A) (S Drive II)**
Enhanced Motor Compensation (Up) (%)	180	**(S Drive II Only)**
Enhanced Motor Compensation (Down) (%)	190	**(S Drive II Only)**
Enhanced Motor Compensation (Up) Gain	50	**(S Drive II Only)**

Throttle Settings		
Throttle Type	1	(0 = Single-ended, 1 = Wig-wag, 2 = Unipolar)
Throttle Deadband (%)	15	
Throttle Gain (%)	140	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
ISO Test Resistor	Off	
Timed Throttle Invert **(S Drive II Only)**	0	(0 = Off, 1 = Inhibit 2, 2 = Inhibit 3)

Trophy S-drive 140 Alpine, foot throttle original electronics (ID-no < QT02400)

Speed Settings	Fast	Slow
Forward Acceleration (0.1 Seconds)	35	30
Forward Deceleration (0.1 Seconds)	13	13
Reverse Acceleration (0.1 Seconds)	40	40
Reverse Deceleration (0.1 Seconds)	25	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	10	10
Max Reverse Speed (%)	40	40
Min Reverse Speed (%)	5	5
Speed Limit Pot Enabled	On	

Operation Settings	
Sleep Timer (Minutes)	0
Throttle Invert	Yes

Battery Settings	
Low Battery Flash Level (Bars)	0
Cable Resistance (milli-Ohms)	100
Calibration Factor	100
Low Battery Alarm	Off
Trucharge Reset Voltage (Deci-Volts) **(S Drive 180A) (S Drive II)**	250
Battery Curve Scaler **(S Drive II Only)**	0

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Latching
Inhibit 2 Speed (%)	0
Inihibit 3: Mode	1
Inhibit 3: Operation	Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	1

Factory Settings	Max	Min
Acceleration (0.1 Seconds)	100	1
Deceleration (0.1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

General Settings		
Soft Stop	On	
Brake Time (milli-Seconds)	1500	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Push too Fast Threshold	35	
Push too Fast Timeout	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	**(S Drive 120,140,180A) (S Drive II)**

Motor Settings		
Current Limit Max (Amps)	130	
Boost Drive Current (Amps)	130	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	80	
Current Foldback Time (Seconds)	70	
Current Foldback Level (%)	59	
Motor Cooling Time (Seconds)	660	
Current Foldback Temperature (Deg C)	30	
Current Limit Min (Amps)	10	
Motor Stall Timeout (Seconds)	0	**(S Drive II Only)**
Motor Compensation (milli-Ohms)	35	
AntiRollback Level	12	**(S Drive Only)**
Pull-away Delay (centi-Seconds)	0	**(S Drive Only)**
Slope Factor	650	**(S Drive Only)**
Anti Rollback Velocity	0	**(S Drive Only)**
Braking Current Limit (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Braking Current (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Speed (%)	100	**(S Drive 180A) (S Drive II)**
Enhanced Motor Compensation (Up) (%)	180	**(S Drive II Only)**
Enhanced Motor Compensation (Down) (%)	190	**(S Drive II Only)**
Enhanced Motor Compensation (Up) Gain	50	**(S Drive II Only)**

Throttle Settings		
Throttle Type	0	(0 = Single-ended, 1 = Wig-wag, 2 = Unipolar)
Throttle Deadband (%)	15	
Throttle Gain (%)	180	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
ISO Test Resistor	Off	
Timed Throttle Invert **(S Drive II Only)**	0	(0 = Off, 1 = Inhibit 2, 2 = Inhibit 3)

Trophy S-drive 140 Alpine advanced electronics (ID-no > QT02400)

Speed Settings	Fast	Slow
Forward Acceleration (0.1 Seconds)	35	30
Forward Deceleration (0.1 Seconds)	13	13
Reverse Acceleration (0.1 Seconds)	40	40
Reverse Deceleration (0.1 Seconds)	25	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	10	10
Max Reverse Speed (%)	40	40
Min Reverse Speed (%)	5	5
Speed Limit Pot Enabled	On	

Operation Settings	
Sleep Timer (Minutes)	0
Throttle Invert	Yes

Battery Settings	
Low Battery Flash Level (Bars)	0
Cable Resistance (milli-Ohms)	100
Calibration Factor	100
Low Battery Alarm	Off
Trucharge Reset Voltage (Deci-Volts) **(S Drive 180A) (S Drive II)**	250
Battery Curve Scaler **(S Drive II Only)**	0

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Latching
Inhibit 2 Speed (%)	0
Inihibit 3: Mode	1
Inhibit 3: Operation	Non-Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	1

Factory Settings	Max	Min
Acceleration (0.1 Seconds)	100	1
Deceleration (0.1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

General Settings		
Soft Stop	On	
Brake Time (milli-Seconds)	1500	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	Off	
Push too Fast Threshold	35	
Push too Fast Timeout	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	**(S Drive 120,140,180A) (S Drive II)**

Motor Settings		
Current Limit Max (Amps)	130	
Boost Drive Current (Amps)	130	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	80	
Current Foldback Time (Seconds)	70	
Current Foldback Level (%)	59	
Motor Cooling Time (Seconds)	660	
Current Foldback Temperature (Deg C)	30	
Current Limit Min (Amps)	10	
Motor Stall Timeout (Seconds)	0	**(S Drive II Only)**
Motor Compensation (milli-Ohms)	35	
AntiRollback Level	12	**(S Drive Only)**
Pull-away Delay (centi-Seconds)	0	**(S Drive Only)**
Slope Factor	650	**(S Drive Only)**
Anti Rollback Velocity	0	**(S Drive Only)**
Braking Current Limit (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Braking Current (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Speed (%)	100	**(S Drive 180A) (S Drive II)**
Enhanced Motor Compensation (Up) (%)	180	**(S Drive II Only)**
Enhanced Motor Compensation (Down) (%)	190	**(S Drive II Only)**
Enhanced Motor Compensation (Up) Gain	50	**(S Drive II Only)**

Throttle Settings		
Throttle Type	1	(0 = Single-ended, 1 = Wig-wag, 2 = Unipolar)
Throttle Deadband (%)	15	
Throttle Gain (%)	140	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
ISO Test Resistor	Off	
Timed Throttle Invert **(S Drive II Only)**	0	(0 = Off, 1 = Inhibit 2, 2 = Inhibit 3)

Trophy S-drive 140, 15 km/h CT original electronics (ID-no < QT02400)

Speed Settings	Fast	Slow
Forward Acceleration (0.1 Seconds)	35	35
Forward Deceleration (0.1 Seconds)	13	13
Reverse Acceleration (0.1 Seconds)	40	40
Reverse Deceleration (0.1 Seconds)	25	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	10	10
Max Reverse Speed (%)	40	40
Min Reverse Speed (%)	5	5
Speed Limit Pot Enabled	On	

Operation Settings	
Sleep Timer (Minutes)	0
Throttle Invert	Yes

Battery Settings	
Low Battery Flash Level (Bars)	0
Cable Resistance (milli-Ohms)	100
Calibration Factor	100
Low Battery Alarm	Off
Trucharge Reset Voltage (Deci-Volts) **(S Drive 180A) (S Drive II)**	250
Battery Curve Scaler **(S Drive II Only)**	0

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Latching
Inhibit 2 Speed (%)	0
Inihibit 3: Mode	1
Inhibit 3: Operation	Non-Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	0

Factory Settings	Max	Min
Acceleration (0.1 Seconds)	100	1
Deceleration (0.1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

General Settings		
Soft Stop	On	
Brake Time (milli-Seconds)	1500	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Push too Fast Threshold	35	
Push too Fast Timeout	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	**(S Drive 120,140,180A) (S Drive II)**

Motor Settings		
Current Limit Max (Amps)	130	
Boost Drive Current (Amps)	140	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	80	
Current Foldback Time (Seconds)	70	
Current Foldback Level (%)	59	
Motor Cooling Time (Seconds)	660	
Current Foldback Temperature (Deg C)	30	
Current Limit Min (Amps)	10	
Motor Stall Timeout (Seconds)	0	**(S Drive II Only)**
Motor Compensation (milli-Ohms)	25	
AntiRollback Level	12	**(S Drive Only)**
Pull-away Delay (centi-Seconds)	0	**(S Drive Only)**
Slope Factor	900	**(S Drive Only)**
Anti Rollback Velocity	0	**(S Drive Only)**
Braking Current Limit (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Braking Current (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Speed (%)	100	**(S Drive 180A) (S Drive II)**
Enhanced Motor Compensation (Up) (%)	180	**(S Drive II Only)**
Enhanced Motor Compensation (Down) (%)	170	**(S Drive II Only)**
Enhanced Motor Compensation (Up) Gain	75	**(S Drive II Only)**

Throttle Settings		
Throttle Type	1	(0 = Single-ended, 1 = Wig-wag, 2 = Unipolar)
Throttle Deadband (%)	15	
Throttle Gain (%)	140	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
ISO Test Resistor	Off	
Timed Throttle Invert **(S Drive II Only)**	0	(0 = Off, 1 = Inhibit 2, 2 = Inhibit 3)

Trophy S-drive 140, 15 km/h CT, foot throttle original electronics (ID-no < QT02400)

Speed Settings	Fast	Slow
Forward Acceleration (0.1 Seconds)	35	35
Forward Deceleration (0.1 Seconds)	13	13
Reverse Acceleration (0.1 Seconds)	40	40
Reverse Deceleration (0.1 Seconds)	25	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	10	10
Max Reverse Speed (%)	40	40
Min Reverse Speed (%)	5	5
Speed Limit Pot Enabled	On	

Operation Settings	
Sleep Timer (Minutes)	0
Throttle Invert	Yes

Battery Settings	
Low Battery Flash Level (Bars)	0
Cable Resistance (milli-Ohms)	100
Calibration Factor	100
Low Battery Alarm	Off
Trucharge Reset Voltage (Deci-Volts) **(S Drive 180A) (S Drive II)**	250
Battery Curve Scaler **(S Drive II Only)**	0

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Latching
Inhibit 2 Speed (%)	0
Inihibit 3: Mode	1
Inhibit 3: Operation	Non-Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	0

Factory Settings	Max	Min
Acceleration (0.1 Seconds)	100	1
Deceleration (0.1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

General Settings		
Soft Stop	On	
Brake Time (milli-Seconds)	1500	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Push too Fast Threshold	35	
Push too Fast Timeout	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	**(S Drive 120,140,180A) (S Drive II)**

Motor Settings		
Current Limit Max (Amps)	130	
Boost Drive Current (Amps)	140	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	80	
Current Foldback Time (Seconds)	70	
Current Foldback Level (%)	59	
Motor Cooling Time (Seconds)	660	
Current Foldback Temperature (Deg C)	30	
Current Limit Min (Amps)	10	
Motor Stall Timeout (Seconds)	0	**(S Drive II Only)**
Motor Compensation (milli-Ohms)	25	
AntiRollback Level	12	**(S Drive Only)**
Pull-away Delay (centi-Seconds)	0	**(S Drive Only)**
Slope Factor	900	**(S Drive Only)**
Anti Rollback Velocity	0	**(S Drive Only)**
Braking Current Limit (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Braking Current (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Speed (%)	100	**(S Drive 180A) (S Drive II)**
Enhanced Motor Compensation (Up) (%)	180	**(S Drive II Only)**
Enhanced Motor Compensation (Down) (%)	170	**(S Drive II Only)**
Enhanced Motor Compensation (Up) Gain	75	**(S Drive II Only)**

Throttle Settings		
Throttle Type	0	(0 = Single-ended, 1 = Wig-wag, 2 = Unipolar)
Throttle Deadband (%)	15	
Throttle Gain (%)	180	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
ISO Test Resistor	Off	
Timed Throttle Invert **(S Drive II Only)**	0	(0 = Off, 1 = Inhibit 2, 2 = Inhibit 3)

Trophy S-drive 140, 15 km/h CT advanced electronics (ID-no > QT02400)

Speed Settings	Fast	Slow
Forward Acceleration (0.1 Seconds)	35	35
Forward Deceleration (0.1 Seconds)	13	13
Reverse Acceleration (0.1 Seconds)	40	40
Reverse Deceleration (0.1 Seconds)	25	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	10	10
Max Reverse Speed (%)	40	40
Min Reverse Speed (%)	5	5
Speed Limit Pot Enabled	On	

Operation Settings	
Sleep Timer (Minutes)	0
Throttle Invert	Yes

Battery Settings	
Low Battery Flash Level (Bars)	0
Cable Resistance (milli-Ohms)	50
Calibration Factor	100
Low Battery Alarm	Off
Trucharge Reset Voltage (Deci-Volts) **(S Drive 180A) (S Drive II)**	250
Battery Curve Scaler **(S Drive II Only)**	0

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Latching
Inhibit 2 Speed (%)	0
Inihibit 3: Mode	1
Inhibit 3: Operation	Non-Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	1

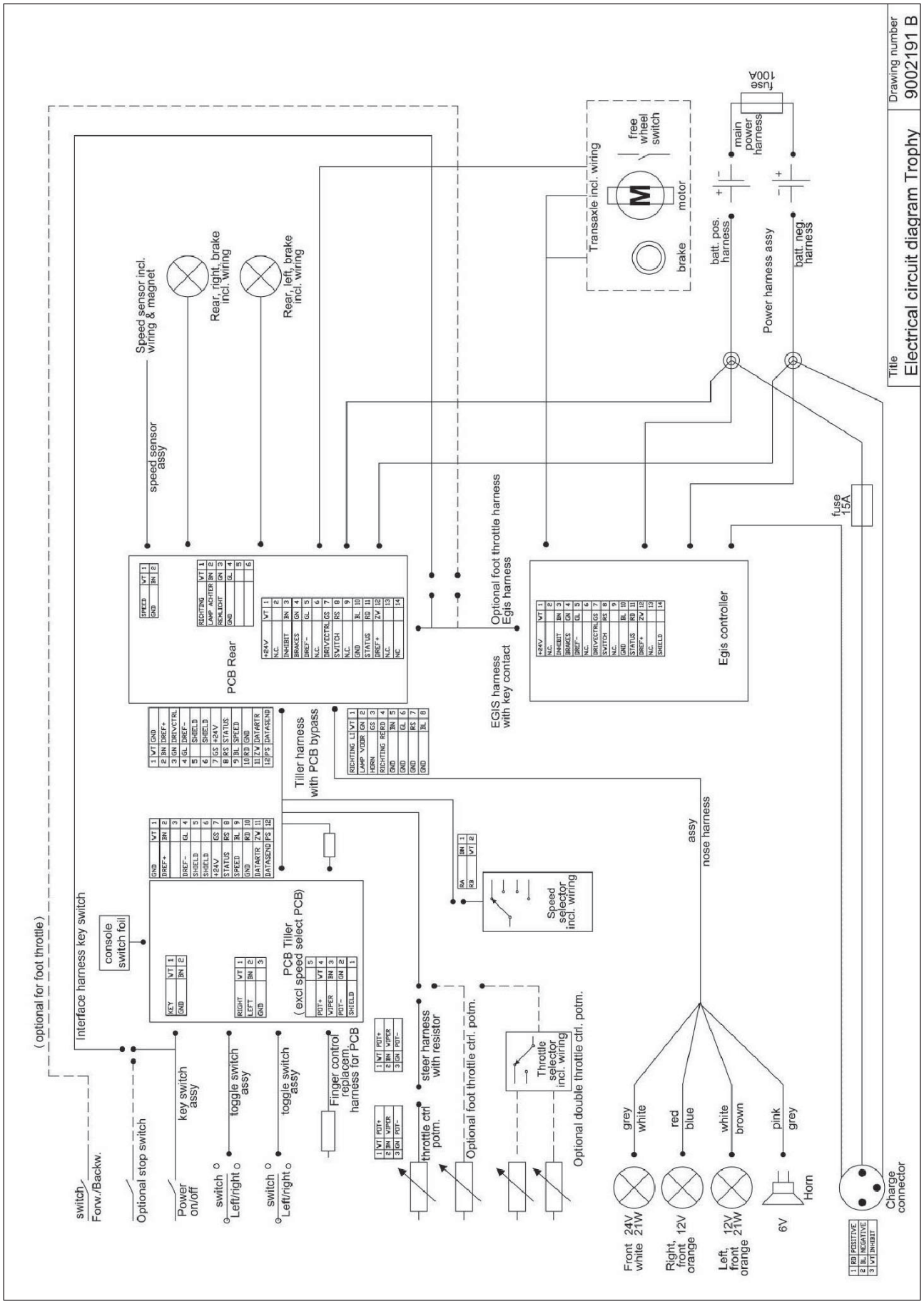
Factory Settings	Max	Min
Acceleration (0.1 Seconds)	100	1
Deceleration (0.1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

General Settings		
Soft Stop	On	
Brake Time (milli-Seconds)	1000	
Output Voltage (Volts)	24	
Status Output Type	0	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	2	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	Off	
Push too Fast Threshold	35	
Push too Fast Timeout	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	**(S Drive 120,140,180A) (S Drive II)**

Motor Settings		
Current Limit Max (Amps)	130	
Boost Drive Current (Amps)	140	
Boost Drive Time (Seconds)	10	
Current Foldback Threshold (Amps)	80	
Current Foldback Time (Seconds)	70	
Current Foldback Level (%)	59	
Motor Cooling Time (Seconds)	660	
Current Foldback Temperature (Deg C)	30	
Current Limit Min (Amps)	10	
Motor Stall Timeout (Seconds)	0	**(S Drive II Only)**
Motor Compensation (milli-Ohms)	25	
AntiRollback Level	12	**(S Drive Only)**
Pull-away Delay (centi-Seconds)	0	**(S Drive Only)**
Slope Factor	900	**(S Drive Only)**
Anti Rollback Velocity	0	**(S Drive Only)**
Braking Current Limit (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Braking Current (Amps)	140	**(S Drive 180A) (S Drive II)**
Timed Foldback Speed (%)	100	**(S Drive 180A) (S Drive II)**
Enhanced Motor Compensation (Up) (%)	200	**(S Drive II Only)**
Enhanced Motor Compensation (Down) (%)	170	**(S Drive II Only)**
Enhanced Motor Compensation (Up) Gain	75	**(S Drive II Only)**

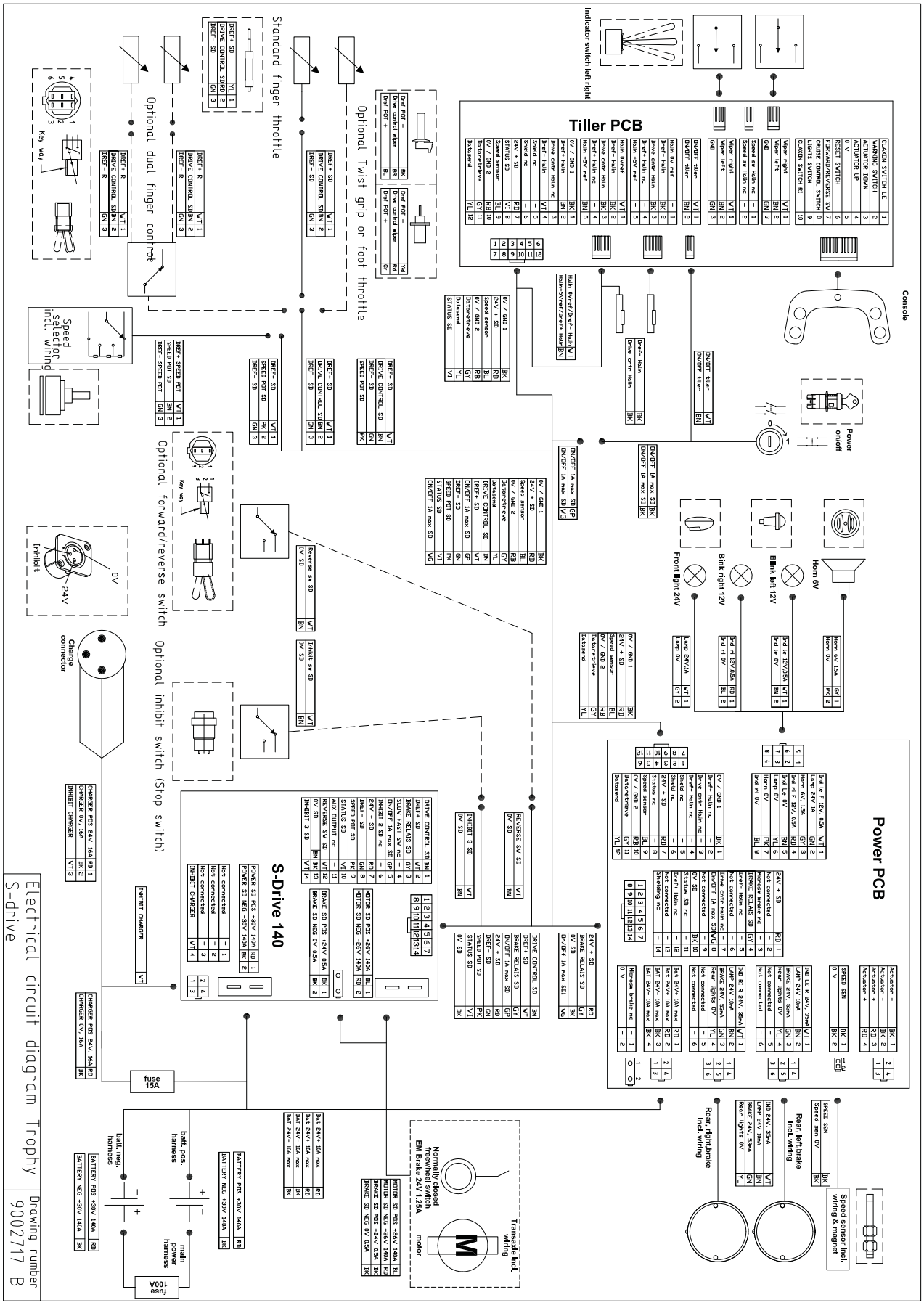
Throttle Settings		
Throttle Type	1	(0 = Single-ended, 1 = Wig-wag, 2 = Unipolar)
Throttle Deadband (%)	15	
Throttle Gain (%)	140	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
ISO Test Resistor	Off	
Timed Throttle Invert **(S Drive II Only)**	0	(0 = Off, 1 = Inhibit 2, 2 = Inhibit 3)

7.7 Electrical diagram Trophy Egis

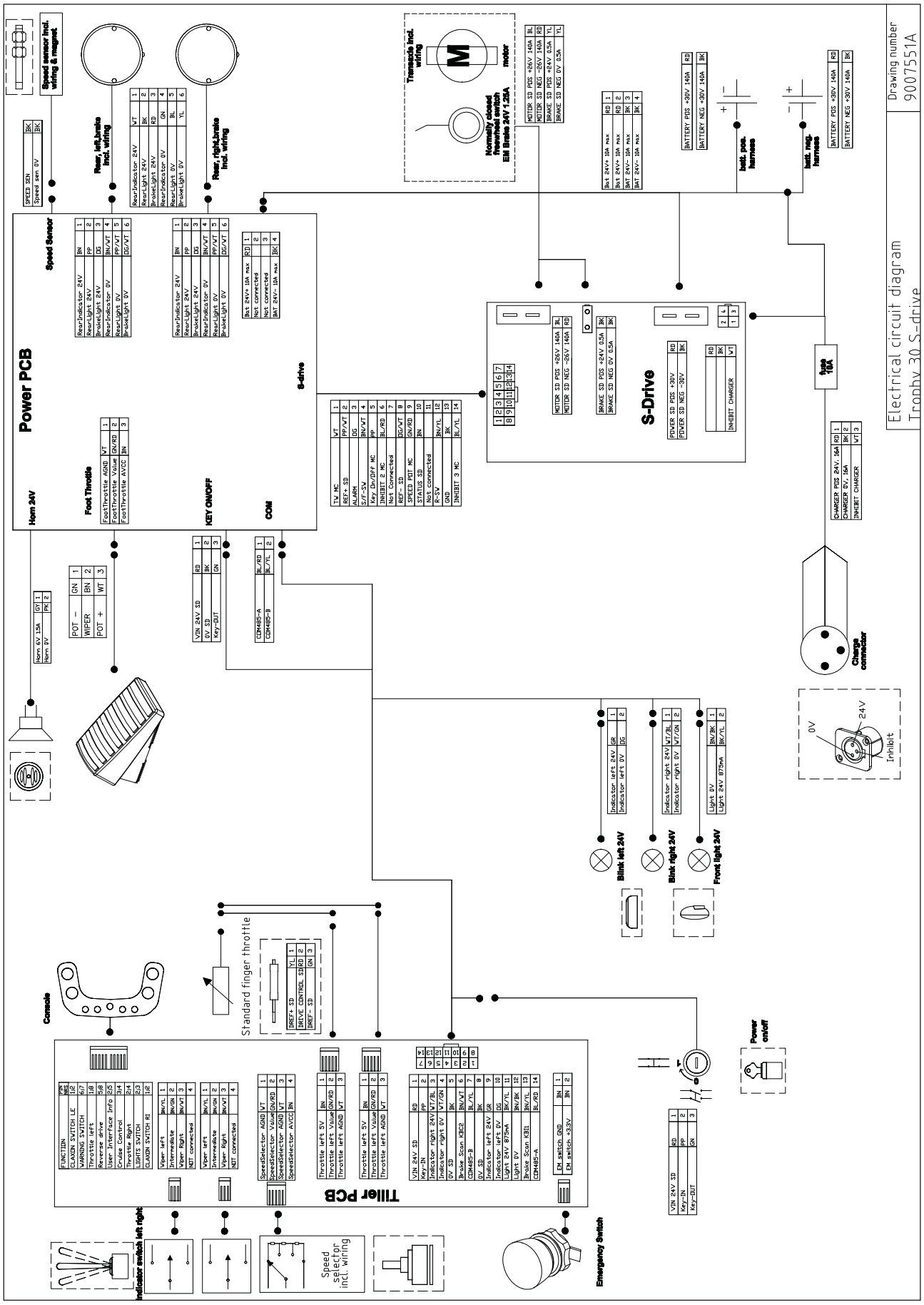


7.8 Electrical diagram Trophy S-Drive

Original electronics (ID-no < QT02400)



Advanced electronics (ID-no > QT02400)



7.9 Service information transaxles

Summary

End of 2008 Handicare has published the product update "Trophy with S-Drive Controller". Among other things, this update mentioned the new sturdier transaxles for Trophy with Egis controller and for Trophy with S-Drive controller. Since the benefits of these new transaxles remained underexposed in the load of information in the news item, we will explain here the improvements to the transaxle and summarise service instructions for these parts.
The new transaxles (Egis or S/Drive configuration) offer **improved bearing and bearing position**. New, **bigger motor brushes** also contribute to extend the life expectancy of the parts and reduces costs of ownership.
Regular preventative service checks are important to verify the condition of the parts and enables to replace them at the right time. See service instructions.

Description

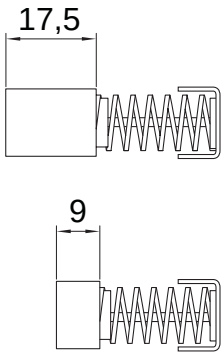
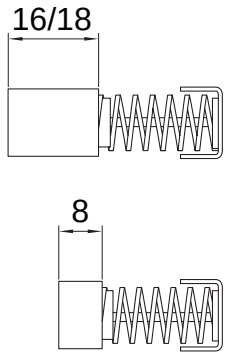
The new transaxles (standard and heavy duty / Egis and S-Drive compatible) as presented in our Product News item "Trophy with S-Drive Controller" dated 10/09/2008 offer improved performance and life expectancy. This is due to the improved bearing and bearing position but also to some changes that were made to reduce wear of the commutator and brushes. This way service costs are reduced.
The new transaxles are equipped with bigger motor brushes. As a consequence the current density (Amps/mm2) in the commutator and brushes drops and this improves the life span of these parts. The effect is more pronounced in the Trophy Egis because this controller uses higher currents than the S-Drive controller.
Regular preventative service checks are important to verify the condition of the parts and enables to replace them at the right time. Therefore see the service check instructions.

Service checks instructions

Check if dimensions of commutator and motor brushes satisfy minimum dimensions as indicated in the illustrations, accordingly to the table below.

Part	Trophy with Egis controller and Schmid transaxle	Trophy with S-Drive controller and Schmid or CT transaxle
Commutator	Once every 3 years	Once every 3 years
Motor brush	At least once a year or every 1000 km	At least once a year or every 3000 km

Clean the collector on the anchor of the motor with pressed air from dust.

Commutator Schmid	Egis controller and Schmid transaxle	S-Drive controller and Schmid or CT transaxle
Dimensions: • minimum 35,4mm.	Dimensions: • maximum(17,5mm) • minimum(9mm)	Dimensions Schmid: • maximum(16mm) • minimum(8mm) Dimensions CT: • maximum (18mm) • minimum (8mm)
		

8 Warranty

8.1 Definitions of terms

Definitions of terms used in this warranty:
- Consumable part: Part that is subjected to natural wear and tear or natural contamination during normal operation within the lifetime of the product (section 9 of Handicare's general terms and conditions of sale);
- Client: Those who purchase the product directly from Handicare;
- Corrective action: Repair, replace or refund of the product;
- Dealer: Those who re-sell the product to the User;
- Defect: Any circumstance due to which the product is not sound or fit to use, caused by a lack of quality of the material used to manufacture the product as well as the quality of the manufacturing process;
- Option: An accessory delivered by Handicare to extend the standard product model;
- Product: Product that is delivered according to brochure or contract (e.g. wheelchair, scooter, battery-charger etc.);
- Part: Part of product that can be exchanged or replaced. This can be an option, accessory, service part or consumable part;
- Returns: Product or part that needs to be returned;
- RMA-process: Process to return goods, contact Handicare's Customer Service;
- Service part: Part that is durable and may be subjected to natural wear and tear or natural contamination during normal operation within the lifetime of the product.;
- User: Those who use the product;
- Warranty: The rights and obligations set forth in this document;
- Warranty period: The period of time during which the warranty is valid;
- Warranty provider: Handicare B.V., Vossenbeemd 104, 5705 CL Helmond, The Netherlands.

Notwithstanding the rights and obligations of Handicare, Client and User set forth in Handicare's general terms and conditions of sale, the rights of the Client and/or User towards Handicare in case of defects are limited to the provisions set forth in this warranty. For the duration of the warranty period Handicare guarantees that the product is without defects.
In case of any defects the User is required –within two weeks after discovery of the defect- to contact the dealer. He has to complete a return form and return the product or part via the RMA-process. Handicare will, at its sole discretion, take the corrective action it seems fit under the given circumstances within a reasonable period of time (depends on nature of claim) from receipt of the completed return form. The warranty period will not be extended after a corrective action.

8.2 Warranty period table

Power wheelchairs / scooters

Description	Warranty period	Examples include, but are not limited to the parts mentioned below
Frame	2 years	Weldment/frame
Drive system	1 year	Transaxle, motor, motor brake
Electronics	1 year	Controller, controlling mechanism, wiring harness, electronic components
Service Parts	New: 1 year after invoice Repaired: 90 days after invoice	Brakes
Consumable parts	40 days after invoice	Wheels, push handles etc.
Options/Accessories	2 years	Mirror, mudguards etc. Not being service part or consumable part.

Handicare will only accept shipment costs and corrective costs related to warranty on equipment during the warranty period.

This warranty will void in case of:
- The product and/or its parts being modified or items having been added by others than Handicare;
- Changes in cosmetic appearance by use;
- Failure to observe the instructions for use and maintenance, use other than normal use, wear and tear, negligence, collateral damage by neglect of earlier symptoms, overloading, third-party accidents, non-original parts used and defects not caused by the product;
- Circumstances beyond our control (flood, fire, etc.).

This warranty does not cover:
- Tyres and inner tubes
- Batteries (covered by the battery manufacturer's warranty).

Clients and/or Users have legal (statutory) rights under applicable national laws relating to the sale of consumer products. This warranty does not affect statutory rights you may have nor those rights that cannot be excluded or limited, nor rights against the entity from whom the product was purchased. Clients may assert any rights they have at their sole discretion.

Version	Page	Draw	Changes
2012 V3			Transfered entire manual in new lay-out (comparable with Trophy 20)
	5		Textual changes in Introduction
	11		Updated table of content (added drawing number 5b, 6b and 10b)
	19	05b	Added exploded view and spare part list Console, printed circuit board and throttle control according electronics ID-no > QT02400
	22	06b	Added exploded view and spare part list Wiring, electronics and batteries according electronics ID-no > QT02400
	24	08+09	Changed position 11 (9000543) in 11a and 11b, 900543 Indicator 12V (ID-no < QT02400) and 9007552 Indicator 24V (> QT02400)
	27	10b	Added exploded view and spare part list Cabling according electronics ID-no > QT02400
	28	4.3	Added article numbers 9007569 and 9007499 according electronics ID-no > QT02400
	29/30		Added 'annual inspection' table
	30-31		Textual changes in chapter 5
	32-67		Added service instructions
	68	5.5	Added paragraph 5.5 Display menu settings
	73	7.2	Updated specifications
	76-85		Changed S-Drive settings into Mk.
	82 / 85		Added controller settings tables according electronics ID-no > QT02400
	88	7.7	Added electrical diagram according electronics ID-no > QT02400
	89	7.8	Added service information S-drive controller ID no > QT02400 transaxles
2013 V1	12	1	• Changed article number position 1 into 9003907 • Changed description of article number 9000178 • Changed description of article number 9000542 • Changed position and description of article numbers 9000584 and 9001994 and added position 20c (article number 9004159) • Changed position and description of article number 15010.4200 and added position 21b (article number 9004161)
	13	2	• Changed one position number 2 into 24 and added into the part list • Changed description of article number 9000542 • Changed position and description of article number 9001815 and added position 18b (article number 9004511) • Changed position and description of article number 15010.4200 and added position 19b (article number 9004161)
	15	3	• Added article number 1015444 Motorbrake cover Schmid • Changed position and description of article numbers 9000550, 9001996 and 1015104 and added position 5d and 5e (article numbers 9007719 and 9007723) • Changed position and description of article numbers 9001172, 9001998 and 1015154 and added position 6d and 6e (article numbers 9007717 and 9007721) • Changed position and description of article numbers 9000549, 9001955 and 1015103 and added position 7d and 7e (article numbers 9007720 and 9007724) • Changed position and description of article numbers 9001173, 9001997 and 1015153 and added position 8d and 8e (article numbers 9007718 and 9007722) • Changed position and description of article number 9000548 and added position 9b, 9c and 9d (article numbers 1015102, 9007716 and 9007725)
	24	8	• Changed position and description of article number 1001905 and added position 1b and 1c (article numbers 1015765 and 1015770) • Changed position and description of article number 1007754 and added position 2b and 2c (article numbers 1015760 and 1015761) • Changed position and description of article number 1001895 and added position 9b and 9c (article numbers 1015766 and 1015771) • Changed position and description of article number 1001899 and added position 12b and 12c (article numbers 1015767 and 1015772)
	25	9	• Changed position and description of article number 1001905 and added position 1b and 1c (article numbers 1015765 and 1015770) • Changed position and description of article number 1007754 and added position 2b and 2c (article numbers 1015760 and 1015761) • Changed position and description of article number 1001895 and added position 9b and 9c (article numbers 1015766 and 1015771) • Changed position and description of article number 1001899 and added position 12b and 12c (article numbers 1015767 and 1015772) • Changed position and description of article number 9001963 and added position 17b and 17c (article numbers 1015768 and 1015773) • Changed position and description of article number 9001964 and added position 18b and 18c (article numbers 1015769 and 1015774)

Version	Page	Draw	Changes
	26-27	10a+b	Changed article number 9000773 into 99117
	28	4.3	Changed article number 9000701 into 1015545
	32-66		Updated several service instructions
2014 V1	13	2	• Changed description of acticle numbers 9002090, 9002091, 9001795 and 9001801 (added 'grey') • Added article numbers 9003406, 9003408, 9004458 and 9004459
	14	3	• Added mounting material • Added article number 1353 and 1001817
	17	5a	Added 'for original electronics' to drawing name and 'for original electronics (ID-no < QT02400)' to the original specific options
	19	5b	• Added 'for advanced electronics' to drawing name and 'for advanced electronics (ID-no > QT02400)' to the advanced specific options • Changed article numbers positions 11 and 28: 9007572, 9007374, 9007373 and 9007372 into 9008789, 9008791, 9008790 and 1016535
	20	6a	Added 'for original electronics' to drawing name and 'for original electronics (ID-no < QT02400)' to the original specific options
	21	6b	• Added 'for advanced electronics' to drawing name and 'for advanced electronics (ID-no > QT02400)' to the advanced specific options • Changed article number position 7: 9004430 into 9008778 • Added position 7 to drawing
	23	8	• Added article numbers 1015775, 1015776, 1015777 and 1015762 Platinum white metallic covers • Added article numbers 1015780, 1015781, 1015782 and 1015763 Graphic black metallic covers • Updated drawing
	23-26	8+9	Changed naming of the Ruby red covers in Red covers
	25	9	• Added article numbers 1015775, 1015776, 1015777, 1015762, 1015778 and 1015779 Platinum white metallic covers • Added article numbers 1015780, 1015781, 1015782, 1015763, 1015783 and 1015784 Graphic black metallic covers • Updated drawing
	27	10a	• Added 'for original electronics' to drawing name and 'for original electronics (ID-no < QT02400)' to the original specific options • Changed description of article numbers 9000786, 9002449 and 9004029 ('added with charge socket')
	28	10b	• Added 'for advanced electronics' to drawing name and 'for advanced electronics (ID-no > QT02400)' to the advanced specific options • Changed description of article number 9004029 (added 'with charge socket')
	29	4.3	• Added position 7: article number 1015507 Lap strap with roll-up for Master Seat • Updated drawing (added Lap strap, updated drawing of Front bag and adapted sort order of images)
	58		Changed article numbers: 9007572, 9007374 and 9007373 into 9008789, 9008791 and 9008790
	70		• Changed article numbers 9007372, 9007572, 9007374 and 9007373 into 1016535, 9008789, 9008790 and 9008791 • Updated 'expand controller options' table
	77		• Changed max. battery capacity C20 88 Ah into 86 Ah • Added chapter 7.3 Driving programs
			Added 'for original / advanced electronics' to desciptions ID-no PBxxxxx only / QBxxxxx onwards
	81-88		Updated Electronic settings
2015-V1	12	1	• Changed description article number 00000.5306 • Deleted article number 9000584 (position 20a), no longer available • Changed article numbers 15010.4200, 9004161 and 15010.4100 into 1015112, 1015113 and 1015118 • Added article number 00000.5500
	13	2	• Changed article numbers 15010.4200, 9004161, 15010.4100 and 00000.4312 into 1015112, 1015113, 1015118 and 9002155 • Deleted article number 00000.2003
	14	3	• Changed description 1011585, 9000603 and 9000683 • Changed article number 1005956,9000548 and 9000547 into 1012527, 1015114 and 1015119 • Deleted article number 1004272 • Added article number 103.00091.000, 00000.3715, 9002221, 00000.2003 and 00000.1702 • Updated drawing
	16	4	• Changed article number 00000.4312 into 9008687 • Changed description 9001135

Version	Page	Draw	Changes
	17	5a	• Changed Qty and description article number 9002792 • Added article number 1002343 • Updated drawing
	19	5b	• Changed article number 1001730 into 9002792 'Screw Ejot K30x6' • Added article numbers 1016928, 1016930 and 1016929
	20	6a	• Deleted article numbers 00355.4203 (2x) and 00355.4213 (position 2, 3 and 4) • Changed description article numbers 9002457 and 1012504
	22	7	• Added article numbers 1002241, 1008392, 1002392, 232.00011.000, 237.00011.000, 1001806, 1002394 and 1008411
	23	8	• Deleted article number 1007756 (position 7) • Changed article numbers 9000460 and 9000461 into 1009947 and 1009946 and changed description • Added article number 9000426, 1012522 and 00000.1503
	25	9	• Deleted article number 1007756 • Added article numbers 9000426, 1012522 and 00000.1503
	27	10a	Changed description article number 9004431
	29	4.3	• Added article numbers 1017464, 1017458, 1017459, 1017460 and 1017461 Colour exchange sets for 3-wheel Trophy • Added article numbers 1017463, 1017415, 1017416, 1017417 and 1017418 Colour exchange sets for 4-wheel Trophy • Added article numbers 4930, 1001813, 1001814, A810, 1003095, 1003097, 1002421, 4824, 1001752, 1001753 and 1015595
	71		Updated spare part matrix for electronic upgrade
	94		Updated warranty text

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